The Builder.

VOL. XXXV. No. 1789. SATURDAY, MARCH 17, 1877.

ILLUSTRATIONS.

Buildings of the New Central Boulevard, Brussels: The Café de la Bourse 266

Third Middlesex County Lunatic Asylum, Banstead, Surrey (Plans, 269).—Mr. F. H. Pownall, Architect 267

CONTENTS.

Architectural Precautions against the Effect of Earthquake 263

A Bill to Prevent the Payment of Illicit Commissions 265

The Ancient Monuments Bill 266

Professor R. M. Barry on Architecture: Domestic Architecture, Thirteenth Century 267

Some Circumstances which Influenced Mediæval Architects in the Arrangement of their Buildings 269

The Revised Rules of the Institute 264

Prefabricated Buildings of the New "Boulevard Centrale" in Brussels 264

Measured Language 264

Third Middlesex County Lunatic Asylum, Banstead 270

Florence and Michelangelo 270

Society of Scottish Artists 271

Greek and Gothic: Society for the Encouragement of Fine Arts .. 271

Improvement of the Thames 272

The National Gallery and the Metropolitan Board's Proposed Street Improvements 272

A Proposed Freemen's Union 272

Medals and Prizes: Institute of Architects 272

A Memorial Fountain at Dulwich to Dr. Webster 273

Worcester Guildhall Restoration 273

The Building Trade and Bricklayers 273

Architects' Actions: Shawbrooks v. Caulfield 273

Question as to the Legality of Gates to Chancel Screen: Church of the Annunciation, Chislehurst 2.5

The Proper Position for the Decalogue 274

The Thames Valley Floods 274

Saxon Stone at St. Mary-le-Wigford, Lincoln 274

Do Our Workmen Improve? 274

What is Law? 274

Framed Houses of Wood 274

Sunderland School Board 275

"Our Lord crowned with Thorns" at St. Peter's, Eaton square 275

Cost of Water to Builders 275

Coalition 275

Cement and Iron 275

Architects' Benevolent Society 275

"The Valley of the Future" 275

School of Art Needlework Exhibition 276

Sarreguemin Items 276

Books received: Dobson's Pioneer Engineering (Lockwood); Tyndall's Lessons on Electricity (Longman-); Nottaseth's Theory and Action of the Steam Engine (Cassell) 276

Miscellanea 277

Architectural Precautions against the Effect of Earthquake.

THE commencement of the present session of the Institution of Civil Engineers has been marked by a discussion on the subject of the light-houses recently erected in Japan, in pursuance of the treaties which opened the ports of that country to European commerce. The information brought before the Institution, both on the report of Mr. Brunton, C.E., and orally by several speakers, was of considerable value to persons interested in architecture, not only as relating to the special contrivances adopted for lighting the Japanese coasts, but still further, as raising the wider question of the most advisable course to be pursued, by the architect or by the engineer, for escaping from the disastrous effects of earthquake on the structures which he is called upon to erect.

It may be said, at the first glance, that the builders of Great Britain are happily exempted from the necessity of any practical study of the phenomena of earthquakes, or of the methods best suited to avoid their destructive effects. Such a narrow creed, however, is altogether unworthy of the present state of the art and science of architecture. Not only so, but it is calculated to place the student who should unfortunately adopt it at a very serious disadvantage as regards his contemporaries and possible competitors. Even in Great Britain, safety from earthquake can by no means be pronounced to be absolute. While certain districts of the earth, marked by the occurrence of numerous volcanic vents for the central fire, are the natural homes of earthquake, no portion of the earth's surface can be pointed out which does not bear marks of having been, at one period or another, subjected to physical convulsion. In our own country the geological period immediately following the deposit of the grit-stones which form the latest member of the coal measures appears to have been eminently distinguished by the number and violence of the shocks which have rent and shivered the rocks in every direction. In historic times we have numerous examples of the sudden re-awaking of a long-silent volcano, and of successive periods of seismatic rest and motion occurring in various localities. Four or five years ago a very sensible shock of earthquake was felt in many counties of England. It did, so far as we are aware, no actual damage. But it gave to those persons who have experienced the effects of earthquake in other parts of the world a very disagreeable hint as to what would have been the effect of the shock if but a little exaggerated. If such a shock of earthquake were to occur in London as the writer of these lines has experienced in Italy, an observer from Highgate-hill would see that part of the panorama which comprises the great province covered with buildings suddenly obscured by a cloud of dust. As that cloud subsided, he would look down on where London had been. St. Paul's Cathedral, owing not only to the science of Wren, but to his unusual regard to stability, might outlast the shock. We cannot name any other building that occurs to us as at all likely to do so. Such an event, no doubt, is improbable. So, it might have been said beforehand, was the Great Fire of 1666. Improbable in a high degree, we quite admit and believe it to be. But no one can say that it is impossible; or that it might not occur at any moment. A long-continued steadiness of the barometer at its maximum height is noted in Italy to be a precursor of earthquake. In England we are without any notion or idea of the existence of any premonitory signs.

But apart from a chance which ranks so low in the scale of probability that many a practical man may think that he can afford to despise it, there is a sound reason why this subject should form a part of the curriculum of the English architect. How is he to know that his services will be in demand in England alone? The world is a wide field, and there is no corner of it from which a demand for such professional aid as England can furnish may not at any moment come. Frequently such demands do arise. We are at this moment sending out a professor of architecture for the university of Yokohama. This gentleman will find himself confronted with the same capricious and terrible force which has alarmed—and very justly alarmed—Mr. Brunton. It is thus evident that it is not a mere matter of fanciful and impractical theory which is in question, but a grave point of practice on which it is of no small importance that all available information should be duly collected and arranged.

Mr. Brunton has not been able to discover that any definite record has been kept of the occurrence of earthquakes in Japan, nor could he obtain any data as to the localities most subject to these disturbances. It is, however, he says, well known that slight shocks are of frequent occurrence, and that during the present century fifteen shocks of a destructive character have been experienced. The palace of the Emperor at Kioto was destroyed by an earthquake in 1828, as were most of the temples with which that city abounded. In 1846, in the province of Shinano, on the west coast, the earth swallowed up eighteen houses, 5,000 dwellings being at the same time destroyed. The most recent destructive earthquake, in the year 1855, was chiefly felt at Yedo. The trembling of the earth continued for a month; eighty-seven shocks occurred; and about 120,000 lives were supposed to have been lost on the occasion.

The methods hitherto employed for ensuring, as far as practicable, safety for human life on the occurrence of serious earthquakes may be said to be three. Of these the first, indeed, can scarcely be called an architectural method, since it consists in the absence of anything worthy to be called an architectural structure. To the dweller in a tent, an earthquake has little more of terror, as far as the overthrow of his dwelling is concerned, than a tempest or violent storm of wind. And in many districts where earthquakes are frequent, where the exigencies of climate are less severe than in our northern latitudes, and where nature furnishes in the bamboo, and other species of grasses and of reeds, an abundant material for a sort of basket-work hut, there exist thousands of dwellings the overthrow of which would prove but a temporary inconvenience to their inhabitants. Fire, in fact, is a more formidable enemy to such bamboo camps than earthquake itself. It is true that fire is often, in such places, a consequence of earthquake. A more directly structural method has been adopted in other cases, with considerable advantage. It consists in the use of timber, so framed together as to be adequate to withstand a considerable amount of movement. When we consider the violent shocks to which a sea-going vessel is exposed in a storm, it becomes pretty evident that a structure like that adopted by the naval architect might be so adapted to the purposes of a dwelling-house as to give as much safety to the occupier, except in the case of the actual opening of the ground beneath his feet, as is experienced by the navigator of a well-found ship in a gale. We cannot cite any example of the full carrying out of this principle; but the use of timber, more or less carefully framed, so as to obtain a certain degree of elasticity and tensile strength for the structure, is by no means uncommon.

The third method is that which was adopted by our great masters in the art of building, the Roman architects and engineers, and which is to this day pursued by their descendants and heirs, the architects of Italy. It consists in giving great weight and solidity to all structural works. Foundations are made deep and wide, and the lower portions of the walls of great houses are at least 9 ft. or 10 ft. thick. The whole process of building is carried on with an eye to the probable occurrence of earthquakes; and mansions are calculated to last for a century without any substantial repairs. The wisdom of this course we see written on the façade of some of the most important buildings in Italy, in a handwriting that admits of no mistake. Thus the Royal Palace of Caserta, a brick building, is seamed in more than one place by irregular vertical cracks, which somewhat mar the noble effect of the design. But these cracks are so many proofs that the architect of the palace was fitted for the discharge of his task. They are so many records of earthquakes, and denote the action of a force mighty enough to shake that massive building, and even to rend its walls from the top to the bottom, but yet inadequate to overthrow its compact and well-balanced structure. Mr. Abernethy, vice-president of the Institution of Civil Engineers, well

remarked, in the course of the discussion, that he was of opinion that weight and solidity, and not slightness of structure, were best adapted to meet shocks of earthquake. The example which he cited, however, was not happy. He referred to the great aqueduct from Cintra to Lisbon, which at one point is at least 250 ft. in height, and which lay within the zone of the great earthquake that destroyed many of the principal buildings of the city in 1755. This structure was, however, uninjured, and remains intact to the present day. We have not under hand any drawing of the noble aqueduct, nor are we aware whether one is accessible in this country. But from personal recollection, not only of its appearance as viewed from a distance, but of a careful observation of the structure, we should say that its chief characteristic was its extraordinary and fairy-like lightness. Not, indeed, that it is to that that it owes its safety. The traces—to this hour unobliterated—of the great earthquake of Lisbon are extraordinarily instructive. They show, in a manner elsewhere unparalleled, the effect of geological formation in transmitting or obstructing the shock of the earthquake wave. The city of Lisbon and its immediate vicinity cover the lines of junction of four geological formations. These are, the fossiliferous clays and marls known as the Almada beds; a thick stratum of sand; basalt; and limestone. The destructive effect of the earthquake was so limited by the differently transmitting qualities of these several strata, that a geological map might be made simply from noting the various degrees of demolition experienced by different parts of the city. The lines of demarcation run sharply athwart the streets, and one building remained uninjured within a few yards of another that was overthrown. Everything that stood on the Almada beds, it is said, was destroyed. The buildings on the basalt suffered next. Those on the sand, comprising the beautiful and elaborately decorated church of St. Geronimo (giving the name from memory) was but little injured, one or two of the pinnacles or crowns of the canopy work of the interior only having been thrown down. The buildings on the limestone, of which the Cintra aqueduct was the principal, were absolutely uninjured. Such, at least, was the account given to the writer on the spot; which was in perfect accordance with the distribution of the still unrepaired ruins, and with the intact state of the slender and lofty piers and arches of the viaduct.

The employment of iron, it is evident, promises to the architect a stability which he would vainly seek either from timber or from masonry. He can combine, by a proper use of iron, the tensile resistance of a timber framework with the massive solidity of a structure of masonry. Even light iron framework has been adopted with perfect success in Peru, where earthquakes are as frequent and as formidable as in any part of the world. At Pisco, a small town on the coast of Peru, exposed to the action of the sea with a heavy surf, there was erected, about twenty-five years ago, from the designs of Mr. Woods, a light wrought-iron pier, with screw piles, extending 2,400 ft. out into the sea. Six or more years ago a great earthquake occurred, by which the city of Arica was overwhelmed. A wave of the sea rushed into the town, carrying with it a gun-brig, which it left high and dry half a mile inshore. The movement of the pier was so severe that persons could not stand steadily on its platform during a shock; but the structure suffered no injury whatever from the violence undergone. Again, at Payta, also on the coast of Peru, the same engineer mentioned a building consisting of light iron framework, lined with wood, which had been in existence twenty-five or thirty years, after sustaining every shock that had occurred in that part of the country.

For the purpose of ensuring the stability of lighthouse apparatus, an expedient, differing from either of the above, has been adopted. Experience has not yet been obtained either in confirmation or in condemnation of the plan, and it will be very interesting to learn the result of its application. Messrs. Stevenson having been asked by the Board of Trade to give advice as to the establishment of a lighthouse system on the coast of Japan, were recommended by the Elder Brethren of the Trinity House, who also had been consulted on the subject by the Board of Trade, to introduce what was termed an "Asciamatic" arrangement for the protection of the holophotal reflectors, which were considered the safest apparatus that could be employed. (Ant seismatic would have been a more correct adjective to use.) The reflector-frame and machine rest on a table or platform, containing three cups or hollow spaces of bell metal, equally dividing the circumference of the platform, which may be compared to that of a railway turn-table. A lower platform, resting on beams framed to the foundation of the building, supports three corresponding cups, and spherical balls of bell metal are introduced between each pair of cups, so that free motion of the upper over the lower part of the apparatus is admitted within a limited range.

It proved, indeed, in the experience of Mr. Brunton, that however admirably the play thus given to the upper part of the apparatus may be calculated to preserve it from injury by the shock of an earthquake, such free motion occasions, at other times, inconvenient results. Thus, a person stepping on to one of the asciamatic tables, for the purpose of trimming or cleaning the lamps, causes the upper part to roll to such an extent that the lamps become deranged; and in the case of revolving lights, the regular motion of the clockwork machinery is destroyed. The consequence was that from a dislike to the unsteadiness of the apparatus the Japanese manager of the lighthouse secured the joint so as to prevent it from acting. With the apparatus in this condition, the only recorded shock of earthquake which has affected any of the lights occurred at Segami, which is lighted by twenty-one holophotal reflectors. This shock threw all the lamp-glasses out of their places, and disarranged the working of the machine, so that the opportunity of testing the efficacy of the apparatus under the circumstances for which it was designed was lost. As earthquakes do not usually give any definite forewarning of their approach, it is evident that any apparatus which is not in a constant state of readiness for action must be entirely unavailing when a shock actually occurs.

It is the opinion of Messrs. Stevenson, the engineers to the Commissioners of Northern Lights, that the tables may be rendered less sensitive, without being actually incapable of motion. To determine the proper degree of sensitiveness would be a matter of considerable difficulty; and that the more so as the exact proportion desirable must partly depend on the violence of the shock to be resisted. An earthquake has recently displaced the glass cylinders of the twenty-one reflector lamps at the Tsurugisaki lighthouse. These merely stood on their bases, and were not supported in any other way. This earthquake, though apparently less severe than some previously experienced, had a peculiar motion. It turned the upper six or seven courses of the stonework of one of the chimneys of the keeper's house,—a column of ashlar masonry about 2 ft. by 3 feet, and 10 ft. high,—half round, and left it in a position diagonal to the lower part, without other fracture or displacement. It is evident that the cup-and-ball arrangement would be entirely unfitted to meet a twisting motion of this nature, the effect of which would very probably be to throw the upper cups entirely off the balls, and thus to bring the two tables into close but irregular contact. But the fact is that the movement of the earthquake wave is not one of which the elements can be anticipated, any more than the time of occurrence. The sensation experienced during an earthquake shock is indescribable. The bravest persons, on their first experience of the terrific force, are struck with a profound awe, and frequently with over-mastering terror. It requires some experience of the phenomenon to be able in any way to analyse the sensations produced; and when this experience is attained, it will be found that they vary greatly on different occasions. Pendent bodies, such as a large chandelier in the midst of a lofty apartment, thus become temporary seismographs, or indicators both of the force and of the direction of the shock. If sufficient presence of mind be retained to mark the direction in which such a body swings some idea will be formed of the direction of the motion caused by the shock, which again is distinct from the direction in which the shock travels. Mr. Brunton quotes the evidence of Mr. Mallet, in his history of the Neapolitan earthquake of 1857, as to the twisting movement that then obtained. Certainly the oscillatory movement above remarked was most apparent during that very formidable earthquake. A solid terrace, provided with an iron balcony, rocked during the principal shock like a ship at sea, so that it was difficult to move across it in order to cling to the railing. Perhaps the best illustration of the variety of movement occasioned by the earthquake wave may be obtained by watching the undulations of a field of oats in a strong wind. Each panicle of the corn is limited to a certain area of movement, both vertical and horizontal, and constantly returns to its normal place. But within these limits every possible variation of undulatory play may be observed. So it is, we think there is no doubt, in earthquakes. There is a transmitted shock, more like that of the induction coil of the electro magnet than anything else, which is probably not of a physical but of an electric nature. But this is accompanied by a true physical movement of the surface of the earth, sometimes tremulous, such as that which is felt in the vicinity of a rapid and heavy railway train, sometimes twisting, as proved by the behaviour of buildings, sometimes more sensibly elevating and depressing, like that of a ship at sea; sometimes backward and forward, the effect of which is not unfrequently marked by the opening of chasms in the ground. These chasms usually re-close, but not always. In the case of rifts in walls they often open to a distance of inches, or even of feet, and then return to their former position, leaving only a thin crack. With all these phenomena on record, and well known to have occurred in various great earthquakes, it certainly seems to us that an asciamatic joint is a contrivance only likely to have been invented by persons who have had no actual experience of the most terrible phenomenon that imperils the works and the life of man, and that, not unfrequently, seems for the moment almost to deprive him of the use of reason.

In countries liable to earthquakes it is the *replica*, or return shock, which is the most dreaded. This may either arise from the fact that the first shock is unexpected, and awakens a terror which is augmented by the expectation of its return; or by the circumstance that the bond of buildings is often broken, or the balance shaken, by the first shock, and thus downfall naturally follows on a second disturbance. It is much to be doubted that the return shock is ordinarily the means of replacing any point in the position from which it is thrown by the first, although this may sometimes be the case. Experience would rather lead to the conclusion that the return shock is mainly an electric phenomenon, somewhat comparable to the transmission of the return electric current through a cable, and that the physical tremulous movement is nearly identical in the shock and in the *replica*. In the first and most formidable shock of the Neapolitan earthquakes of 1857 there was no appreciable *replica*, but a continuous motion, commencing quietly, attaining a very terrific intensity, and gradually decreasing. It is difficult to minute the duration of such a phenomenon, but it allowed time to exchange a few words intended to tranquillise an invalid, to walk across a large room, out on to a terrace, and then to cling for some little time to the balcony. This great shock only threw down a few stones in well-built Naples. In Calabria it was most destructive; and is said to have destroyed 30,000 persons.

The leading principle of the architecture of Japan appears to have been to construct the houses with a degree of elastic tensile strength, adequate to resist the oscillatory movement caused by earthquakes. The houses are constructed with a light wooden framework, without diagonal struts or ties of any kind. The roofs are heavy, and the uprights which support them are mortised into horizontal beams at the top and the bottom. They are designed to have a maximum of elasticity, and may be moved from the vertical to a considerable extent without destruction. Mr. Brunton questions the efficacy of this mode of structure in resisting severe earthquakes, but statistical data on the subject are desirable. Professor Palmieri, of Naples, probably the most experienced earthquake observer in the world, lays down the rule that although solidity and strength in a building do not afford perfect protection against earthquake, they yet render absolute overthrow almost impossible. Such an opinion is very fully supported by the phenomena that may be witnessed at Resina, Portici, and other places on the foot of Vesuvius after any of the earthquakes which, in that volcanic neighbourhood, are so frequent and so severe. The people fly from their rent houses, but return in a few days and solder up the cracks with masonry and cement. Overthrow is extremely rare in this vicinity, and the lava and ashes of the volcano have proved more destructive, since the date of the Christian

era, than earthquake. In Basilicata, on the other hand, this terrible phenomenon seems to have its cradle, and absolute demolition is a well known occurrence. All the experience that we have been able to collect indicates the propriety of the use of iron framework by way of resisting the shocks of earthquake. We cannot feel prepossessed in favour of such an expedient as the "asismatic joint."

A BILL TO PREVENT THE PAYMENT OF ILLICIT COMMISSIONS.

WE have reason to believe that a Bill to be entitled "An Act to make the receiving of Bribes by Agents criminal," has been privately drawn; and before long it may engage the attention of Parliament. Worked up from a sketch made by Sir Edmund Beckett in a letter to the *Times*, of January 3rd last, its purport is to render criminal what many honest people now consider to be merely ungentlemanlike and venial; but which the preamble of the draft Bill describes as illegal and dishonest. In fact, as a law newspaper said, with some little *naïveté*, in its "Current Topics" of a few weeks ago, it is proposed to create a new crime. We hear that the classes of people to be operated upon are agents, clerks, or servants; and we believe that it is the intention of certain well-meaning individuals to submit to the House of Commons a proposal that if any one of these receives, or tries to obtain, or offers money or other valuable consideration, which may fairly be styled a bye-commission or bribe, he shall be guilty of misdemeanour, and be fined; on a second conviction, he shall be liable to imprisonment even with hard labour, and in any case the amount of the bye-commission shall be refunded to the employer out of the fine to be paid by the agent, clerk, or servant. The clauses reduced to the level of other than a legal understanding are something to the following effect:—

Any agent who without the consent of his principal receives money from another person in respect of any dealing between the latter and his principal shall be guilty of a misdemeanour.

Any person who gives money to the agent of another in respect of any dealing with the principal shall be liable to pay the principal twice the amount given to the agent as well as the costs of recovery in the County Court.

If either briber or bribee gives information of the bribe, the Court shall be bound to act upon it and the evidence shall not be used against the informer.

The words "agent" and "principal or employer" are defined, and made to apply even to her Majesty's civil and military servants.

The subject of "Bye-Commissions or Bribes" was so fully discussed in our number of January 20th last, that little is left for us to say in regard to it. The general principle, or want of principle, whereby such bribes are given and accepted is as old as history; and its condemnation, in our own particular branch of the community, is as old as Vitruvius. The indignation recently shown by those architects who were decoyed into print by certain anonymous letters, was based upon the natural feeling that it is unjust to visit a whole profession with the suspicion which the tagrag and bobtail do, so it is confidently affirmed, arouse. We repeat, for it is really no exaggeration, that one-half of the world does not know how the other half lives; and it is almost equally certain that at least a part of "society" is utterly unconscious of much, without using hard words, that goes on in its very midst. In spite of softening and improving and "culturing," human nature retains its attributes; and in our own time, in the face of special legislation,

> "Two or three visits and two or three bows,
> Two or three civil things, two or three vows,"

will accomplish as much as it effected in the days of Swift, and probably in the time of Bacon, or in even "merrie England" of the middle ages. It is neither desirable nor necessary that everybody should know everything that everybody else does, says, or thinks,—at least, not more than the newer newspapers feel it their duty to impart to the public generally. We admit, ourselves, a radical indisposition to stir muddy water, even in the hope that some one else will come forward to clarify it. That the practice of paying and receiving commissions, often *sub rosâ*, is habitual we are forced to believe, for how otherwise could many people in "the world," and holding high their heads, maintain the position they do? That it is the practice of architects and builders jointly engaged upon works of construction to demand and offer illicit payments we do not believe; at least, we are entirely ignorant of it. Yet it would be affectation and an injustice to our immediate colleagues to turn a deaf ear to the hints and innuendos of known contractors, even though just a taint of jealousy and impatience of those whose duty it is to control them, may help to point insinuation, or provoke the "would an I dared," which often does more harm than any direct charge or special accusation. That the practice existed among inferior men of business before the Institute of British Architects was founded, more than forty years ago, we know very well; but in those days the profession was composed of a different class of men to that which largely fills its ranks at the present time. That people who have not the means of knowing the *pros* and *cons.* of the question believe that it is still generally carried on is also unfortunately certain; and their excuse may be found in such a circular as the following, which is printed in excellent type, and upon cream-laid note-paper of a highly effective appearance. Thus:—

> Important to Architects and Surveyors.
>
> J. EICKE,
> BUILDER, DECORATOR, and AUCTIONEER,
> 29, TOWNSHEND ROAD,
> ST. JOHN'S WOOD, N.W.,
>
> Begs respectfully to state that he allows 10 per cent. discount for all work introduced to his Office for Buildings, Decorations, or Repairs, and half the Commission on Auction Sales and Levies for Rents.

All that we know about this enterprising, if not seductive, tradesman, with an un-English cognomen, is that his name is in the Post-office Directory, and that his circular is in our possession. We are told that other equally "important" offers are constantly made to architects, and the deduction is that they are sometimes accepted. Otherwise, it is urged, they would be resented, and the delinquent would be called to account. But the fact is, so many "important" announcements are now received through the post that printed circulars are usually consigned to the waste-paper basket without being looked at; and, if a few people do read them, and if they do feel indignation at the receipt of such circulars as the one we publish, the slightest knowledge of the world suffices to prevent them making an exhibition of it. One does not resent the injunction, "Thou shalt not steal," as a personal implication that one is capable of so doing. Nevertheless, in presence of the train of possibilities which such a circular carries to the minds of diffident individuals, it is impossible to think that a little practical legislation bearing upon the subject is either uncalled for or premature.

There is, however, a weak point of professional practice which Parliament cannot touch, even if it succeeded in understanding the advantages and disadvantages attending it. This weak point, by custom, carelessness, and an innate desire to leave things alone, can become, if it have not already become, a serious blot upon the good fame of practitioners; and very often from the laudable desire to believe that all men are what they ought to be, rather than what they are. Though no legal enactments suffice to make people virtuous, bodies of men can be made to feel the expediency of doing what is right in the eyes of the majority; and we see no reason why that majority, in the case of the architectural profession, should not be a virtuous one. The Royal Institute of British Architects is a chartered society; freed of cliquism, and above the suspicion of jobbery, it can impose rules upon its own members which outsiders and the public will ultimately appreciate. But to do this it must be more serious in its doings and aspirations than it is. Proposals for its improvement have been discussed this week, and these are couched in practical terms. As we have already explained more than once, every member of it makes a declaration,—morally takes an oath,—that he will abide by certain rules of practice, the negation of which affects not only his honour as a man, but, in aggravated cases, leads to his expulsion from the general body. To the declaration now made by members, it is proposed to add what might have been an important clause; and in order to explain to the public,—for whom we write even more than for the building fraternity,—the meaning of that clause, we must describe the ordinary procedure in dealings between an architect, as the agent of his employer, and the contractor of the building to be erected. A gentleman, say Mr. Brown, wants to have a house built; and, as he has neither time, inclination, nor capability of ordering the work and controlling the builder, he employs an architect to act as his adviser,—his agent. After consultation, plans are prepared and Brown approves them. The architect, having calculated the cost, explains that the new house can be completed for about 20,000*l.*; and Brown consents to pay that sum, and also a commission of 1,000*l.* to his architect,—that is, he consents to give the architect 5 per cent. upon the amount paid to the contractor for the completion of the building. Then to engage a contractor: it is the custom to invite a dozen or half a dozen of the trade to tender,—that is, to offer to execute the work for a certain sum, which they specify; and for which each will bind himself to complete it. But the competitors cannot ascertain the probable cost of the building from an examination of the plans and specification alone. They must have the measurements of the different parts of the house, and the quantities,—cubical, superficial, and linear,—of the different materials necessary to compose it, scientifically reduced to a bill or bills. This is a work of labour and consequent expense; and as only one of (say) twelve competing contractors can possibly be chosen (generally the one who offers the lowest tender), the eleven would incur a substantial loss if each were compelled to make his own bill of quantities. Therefore the twelve competitors meet by arrangement, and appoint some one to prepare this bill for the joint use of the twelve; and it is an understood thing that the contractor who is ultimately chosen will pay for it. Such a bill of quantities,—a work of calculation totally extraneous to the preparation of the design and the architectural compilation of the building,—is the special business of a class of people called "quantity surveyors," who are paid a commission of 2½ per cent. or less on the amount Brown will pay to the contractor for his house; and this commission is added to, or rather included in, the contractor's tender.*

Let us see how this system may be, we do not say is, abused; or how, even with the most straightforward and honourable intentions, it may be made prejudicial to the pecuniary interests of the architect's employer, Mr. Brown. No one ought to know better what materials, their nature and quantity, are to be used in the construction of a building than its architect and his assistants. He therefore thinks, and according to one view of the matter justly, either that he himself should prepare the bill of quantities, or that the quantity surveyor should be his own, not the contractor's, servant. But who pays the quantity surveyor? The contractor; and if the architect prepares the bill of quantities himself, the contractor must pay him. This may be seen to be inexpedient, therefore the architect, to keep his own hands free from the contractor's money, orders his clerk or assistant to prepare the bills of quantities. But if the contractor pays the clerk, who pays the contractor? Brown; and thus Brown's money follows a circuitous route through the contractor to the clerk, who is the assistant of Brown's agent,—the architect. Moreover, the architect, if he be composed of "flesh and blood," is hardly likely to allow his clerk to receive 500*l.* for reducing to a bill the quantities of a building, for the design and superintendence of which he himself is only paid 1,000*l.* It is, therefore, hinted that the architect must sometimes share with his assistant the sum of 500*l.*,—a course neither illegal, nor, if done openly, dishonest. The Royal Institute of British Architects proposes to get over the difficulty by adding to the present "declaration" made by members the following clause, viz., that "No 'quantities' shall be supplied by any member of the Institute for works executed under his own superintendence, without the concurrence of his client, and unless such 'quanti-

* Of course there are a host of complications which may intervene, such, for instance, as the employment of two "quantity surveyors," one to represent the architect and his employer, the other to represent the contractors. In that case the commission on the contractor's accepted tender is divided between them. Our object, however, is not to give varieties of practice, but to explain one phase of it, which is open to possible corruption and certain innuendo.

ties' are paid for by him."* The practical result, however, of such a course, is to raise apparently the ordinary commission of 5 per cent. to 7½ per cent.; and this is likely to be refused by many who would pay the sum under any other name to the contractor without hesitation. But really the preparation of the bills of quantities is the contractor's business, with which the professional man had better have nothing to do. His plans and detail drawings, as well as his specification, ought to suffice to explain and defend his meaning and intentions; and he ought not, under any pretence,—to use, or perhaps enlarge upon, the words of one who, but a few years ago, was a distinguished quantity surveyor, and who is now a member of Council of the Institute of Architects,—to receive from the person he is employed to control, payment for services, real or nominal, which also involve obligations towards such person utterly conflicting with his duties as an architect. At the same time the right, which Fellows of the Institute now enjoy, of preparing bills of quantities for buildings erected under their own superintendence, can be so interpreted as to permit a divison of profits between the quantity surveyor and the architect, which is much more reprehensible,—because it must be done secretly,—than the employment of the architect's clerk in the capacity of quantity surveyor is objectionable,—the latter course always, to some extent, being an open transaction. In fine, we repeat that the architect who prepares his own bills of quantities, or who employs an assistant, whether in or out of his office, to prepare them, lays himself open to suspicion,—often unfounded, we admit,—even though he does so with the concurrence of his employer, and is paid by the same.†

As we before said, no Bribery Bill will touch details of practice which, by the bye, are the exceptions and not the rule, and which are not opposed to the letter of good faith and rectitude. A Bill to make the taking of bribes by agents, clerks, and servants criminal must of course be confined within certain limits, and though we are told that the bribe is to be made to mean not only "money," but also "other valuable consideration," we presume the line will have to be drawn somewhere. Men cannot be prevented from helping one another; nor are the days of patronage over. What the modern clients do for their patrons—clients of the press, of the public offices, of the public companies, of diplomacy, of fashion, of finance,—are the sentimental crimes which can be tried only in an ethereal court. A star or a garter, place, the run of good society, a favourable notice in a money article, are often "valuable considerations,"—but who is to prove the fact? Will such things be unknown, when the malpractices of a few,—a very few,—agents are made public and punished? Nevertheless some such enactment as that suggested by Sir Edmund Beckett is necessary, if only as a recompense to the nation for the injury done to public morality by the working of the Limited Liability Act. In the appendix to a pamphlet on "Commissions," recently published,—the preface to which is very properly signed by Mr. John S. Storr, a partner in a well-known firm of auctioneers,—there is a letter written by "A London banker and public writer," from which we quote the following paragraph:—"Would that it were within the bounds of possibility to open the doors of certain charnel houses in and about Lombard-street! What has been the price paid and received there for the public loans, the railway enterprises, the grand hotels, the numberless mushroom limited liability companies that have been among the bubbles blown and burst in the last ten years? I know that in many of these cases huge commissions have been 'arranged,' divided, and subdivided, with eminent solicitors, engineers, contractors, architects, and promoters." At the same time, without limited liability we should not have obtained many of the grand enterprises which materially increase the general comfort and prosperity; but the Act has done almost as much, some say more, harm than good. The commercial reputation of the country, and the reputation of individuals far above the ranks of commerce, have been irretrievably impaired by the open temptations and secret emoluments which limited liability in associations holds out.

We are not, however, going to take up the hue and cry which has been raised. The almost tragic style in which the decadence of this country has been treated in letters and reviews upon the subject of "Commissions"; and the indignation, almost heroic, with which architects who made a fight for their good name were met by the larger number of those who never by any chance have, or will perhaps, come in contact with them, either professionally or in private, afforded amusement to the thinking fraction of the community, who knew what it all meant. The decline and fall of everything is a fertile theme of which the weakest intellects sometimes succeed in making capital. But the abyss of bribery to which some auctioneers appear to have access, offers slight attraction to less public characters. We suppose that the picture of it was painted, partly by anonymous artists, to exhibition pitch, and that after a time it will be possible to look at the work without being dazzled. We are not, however, sanguine of a millennium of commercial virtue; nor, unless we are greatly mistaken is Sir Edmund Beckett. But if he succeed in breaking only one of the necks of the monster which he and his friends have valorously attacked, he will have our hearty congratulations. We do not, of course, feel towards him as Byron ostensibly felt towards Jeffrey; but we do wish the "dear damned contemner" of those very architects whose artistic exploits he has long attempted to surpass, *toutes sortes de bonheur*,—and to the managers of his Bill every possible success.

* This proposition of the "Improvement Committee" has been accepted; and indeed the whole scheme of reform has been approved with a few slight amendments. But, as was seen during the second debate on Tuesday last, the terms of the additional clause relating to "quantities" can be evaded with very little difficulty and no literal breach of faith. The public, however, has a remedy in its own hands: by employing only those architects who are willing to forego their present claim—not exercised by the superior half of the profession—to prepare bills of "quantities" for their own works.

† It may be useful to quote from "A Book on Building" what Sir Edmund Beckett, and doubtless many people who follow his views, think of the "Quantities" question. At pp. 31 to 37 will be found the following:—"Before we consider the tenders and the contract there is another intermediate element or document which in modern times has assumed great importance, though the employer generally knows nothing of it, nor is it any part of the contract legally, *and nothing but confusion arises from recognising it as such*, though it may sometimes be referred to for information; that is, the bill of quantities. . . . . Formerly contractors used to tender from such rough estimates as their own experience enabled them to make, ... but now, under the keenness of competition, they have every inch of section of mouldings measured from the plans: the contractor wants to know exactly how many bricks will be required, and an eighth of an inch thickness in a board is claimed as an extra if it has not been specified. . . . The usual practice is for the quantities to be taken either by the architect himself, if he is not above it, or one of his clerks acting independently, or by some still more independent measurer agreed upon by the builders who wish to contract; and one whose tender is accepted pays him, all of them, of course, having added the charge to their tenders" . . . .; but "I advise employers not to let the quantities be taken by *any one who can be made out to be their agent*. . . . . In some cases quantities are given avowedly excessive, to enable the architect to make additions; which is wrong. . . . . The real causes of the proverbial excess of cost over estimates are, first, that the plans and specification seldom comprise all that they ought to do; and secondly, because alterations are required either to cure mistakes and omissions which become evident as the work goes on." To conclude our summarised quotation, Sir Edmund adds,—"It is evident that architects' clerks are not impenetrable, for the tenders even for private houses get somehow into the architectural newspapers, sometimes to the surprise of the architects themselves." We must be allowed to add that we do not understand the gist of this last remark, or see the force of the insinuation. We never by any chance receive these lists from the architect's clerk, and as to paying for them the idea is absurd.

Inhabited House Duty.—On the 13th inst. a very large deputation waited upon the Chancellor of the Exchequer at the Treasury, Whitehall, to press upon his consideration the necessity of a readjustment of the tax, so that certain anomalies which were felt to be unjust should cease to cause the tax to press upon the occupants of buildings which ought to be exempt. Mr. Alderman Lawrence said exceptions had been made in favour of houses occupied for purposes of trade, and the point they came to urge was that if any of the large buildings of the City let in offices a room was occupied by a solicitor, a civil engineer, or any professional gentleman, then the whole building was taxed, unless, indeed, the solicitor made out that he was also a scrivener, and the civil engineer, by ordering a screw, made out that he was a practical engineer. People should not be driven to these evasions. The Chancellor of the Exchequer said what seemed to have been the original intention of the Legislature was, that there should be certain taxes upon houses which were inhabited, but that premises not inhabited at all, but simply used for business purposes, were not to be taxed. He was satisfied what was desired would lead to a loss of revenue; but, at the same time, all he could say was that he should be glad to attend to the suggestions which had been made.

THE ANCIENT MONUMENTS BILL.

THE perseverance of Sir John Lubbock seems at last to have some chance of effecting its purpose in convincing a number of members of our worshipful Legislature that the preservation of any records affecting our knowledge or our investigation of the early history of this country is something else than a matter for joking; if, at least, we may venture to put the best and most hopeful interpretation on the majority of forty-eight for the second reading which he obtained last week. During the first and second attempts which the author of the Bill made to obtain a hearing for his scheme, he was met (if newspaper reporters are to be trusted) by the frequent laughter of his discreet audience; an exhibition which, as we took the liberty of saying at the time, was indicative of the presence of St. Stephen's of a good many of the class of persons technically termed "blockheads." There seems to be an amendment in this respect; at all events, we do not hear of absolute hilarity on the subject among honourable members; though, on the other hand, some of their remarks in the process of the discussion, if not witty in themselves, might very reasonably be the cause of wit in others. Lord F. Hervey's deliverance of his mind on the occasion deserves to remain on record as a remarkable instance of Parliamentary reasoning. His lordship's objections to the Bill seemed to be based on the ground, first that some one had mistaken some old cesspools at Oxford for a pre-historic relic; and secondly, that such relics as the Bill went to protect were those of a barbarous people, whom our more enlightened ancestors had overcome and driven from the island, and of whom therefore it was scarcely necessary or fitting to keep up any remembrance. Apart from his lordship's remarkable views of early history, his opposition seems to have been suggested also by the idea that Sir John Lubbock (whose weak and fanciful sentimentalism is so marked a trait in his public character) had urged the Government to get up a factitious "enthusiasm" about things which were mere barbarous relics. If such buildings only as the cathedrals had been included, and nothing so mean and worthless as old stones and barrows, Lord F. Hervey would have condescended to give his adhesion to the Bill. As there is no knowing how large a following such sentiments may have among the class whom Mr. Matthew Arnold calls "the barbarians" of modern life, we may just point out, in the first place, that these strictly architectural monuments are not in danger,—at least, not in the sort of danger which this Bill provides against, seeing that most people with a particle of education are aware of their value, and wish to see them preserved; the only question at present being, in fact, whether some of them have not been preserved too much. But in the second place, the motive of Sir John Lubbock's Bill is not "enthusiasm" for barrows and inscribed stones as such; not a mania like that of Oldbuck. It is the perception, in which every man even tolerably well read in history shares, that all records of any date, which are the work of human hands, are valuable, and may (as the study of ancient history and ethnology progresses) become increasingly so, as a part of the few and uncertain, but deeply interesting, clues which are left us as to the earlier history of our race. Numbers of such records have, doubtless, disappeared, either by intentional destruction or through neglect and the operation of time; it is of the more importance to hold tenaciously to the few that remain, remembering that every object of this kind, once removed or defaced, is gone for ever: it is the loss or the destruction of that which no human power can replace: and when we consider the importance and interest to the modern world, so keenly inquisitive about the past, of every record of this kind, it is perfectly idle to talk, as some more logical but equally wrong-headed opposers of the Bill did talk, about its interference with the rights of private property. It is no more an interference with private property than is every Bill brought forward for the smallest branch railway-line; and its object is one which, so far as it goes, is of more directly national interest than any railroad. Railroads are made for the convenience of districts, large or small; Sir John Lubbock's Bill is framed in the interests of all educated people in Great Britain, without distinction of locality. Educated people, in the sense in which we here use the word, are a numerical minority, it is true; it is for that very reason that the Bill is wanted, and this special

protection is considered necessary for ancient monuments, apart from such works of architecture as cathedrals. As Sir John Lubbock inferred in his reply, such buildings are usually more or less matters of interest and pride to those in their neighbourhood, and there is every probability of a natural wish to take care of them, without the application of any legally-compelling machinery. We will not undertake to say that some more strictly national supervision might not advisably be extended to our Mediæval monuments of architecture, and that restoring-architects and ecclesiastics might not with advantage be made more directly and practicably amenable to public opinion in regard to their proceedings; but it is obvious that a very much more complicated and costly legal machinery would be necessary to provide for such a principle. But the class of monuments which this Bill aims at protecting is precisely that of which the neighbouring inhabitants are often most ignorant of the value, which is really known to and estimated by learned archæologists in other parts of the country. It becomes, therefore, of the greatest importance to save these first, which are more easily dealt with; and the custody of our great architectural monuments, if it is to become a national care, can be more deliberately considered in some future legislation.

We may give just an outline of the purport and provisions of the Bill. In general terms it provides against "injuring" the class of monuments described; and in the definitions of the preamble "injure" or "injury" is defined as including "the destroying, removing, defacing, altering, covering up, building on, undermining, or in any manner permanently or temporarily damaging or endangering the safety or stability of a monument or any part thereof, or any marks thereon." This seems to comprehend every possible case. The Act is defined as applying "to the several monuments specified in the first schedule of this Act," and, in the next clause, "to any British, Celtic, Roman, or Saxon remains, or to any monument which is in the opinion of the Commissioners of the like kind as any of the monuments specified in the said first schedule, and which is not situate in any park, garden, or pleasure-ground." This sentence, of course, renders nugatory the objection which was made to the schedule, in the discussion, as not being full enough. It is true that the list might have been more exhaustive than we can think it is, but its real operation in connexion with the document is as defining the nature of the objects referred to, for which purpose it is amply sufficient. The Act is to be put in force by seven commissioners (named, with a provision for filling up the number as becomes necessary), to act under the style of "The National Monuments Commission." When they have applied the Act, by serving a notice in writing (according to an appended form in the second schedule) on the occupier of the land on which it stands, it will not be lawful for any one to "injure" the monument without the consent of the commissioners; but "a person who but for this Act might lawfully deal with the monument," and who wishes to "injure" it (the word, of course, being taken in the special legal sense as defined in the Act), can, on giving notice of his intention, and stating how he proposes to deal with it, place the commissioners under the obligation of either purchasing the monument, or gives a "power of restraint" which prevents his dealing with it (according to the position the applicant occupies in respect to his legal title to the monument), within three months; and if they fail to take such steps within that time, such failure will be construed as a permission to the "person" to deal with the monument in accordance with his expressed intention. We should like to see it made a little clearer and more definite that this permission only extends to the actions which the owner or person qualified has previously proposed in writing. This is evidently what is meant, but it is hardly as clearly stated as it might be; and we could imagine that, in a case where the commissioners had given this negative sanction to "dealing with" a monument, it might be interpreted with undesirable latitude.

Provision is made for an appeal, on the part of any one who feels aggrieved at not being permitted to deal with the monument as he wishes, to a judge of one of the superior courts of law or equity in England and Ireland, or to a judge of the Court Session in Scotland. The Commissioners have the power to acquire such rights of way as may be necessary for the access of the public to the monument; and, moreover, the Act may be applied by the Commissioners to any monument of whatsoever kind, and wheresoever situate, if the following persons give their consent, viz.:—

"1. The owners or occupiers of the site of the monument; and,

2. Any person entitled to any beneficial interest in the site of the monument," or the guardian or trustee of such person.

The word "site" in regard to this clause is taken as including all land surrounded by any part of the monument, or "adjoining" it: which last provision is very vague, but appears to be defined further on by the statement that no ground shall be called part of the "site" which is more than fifty yards from any part of the monument. This should surely have gone with the clause in which "site" is first mentioned; and the construction of the document in regard to this and one or two other points seems a little clumsy, and will not improbably be modified in Committee. We would also suggest that the phrase, "any monument whatsoever," although we are very glad to see such a power of extension of the provisions of the Bill as it implies, requires further explanation or definition. As we read the language of the Bill, it seems that this may verbally be taken to include the cathedrals and churches, and old buildings generally; but that is probably not intended.

The penalties of infringing the conditions of the Bill are stated in a reference to previous Acts of 24th & 25th Vict. Provision is made for the investing the Commissioners with power to enter upon and inspect, at any time "between sunrise and sunset," any monument concerning which they have acquired a power of restraint or purchase, and to break down any door or enclosure preventing their access. All expenses incurred by the Commissioners to come from the Public Treasury. The Commissioners may at any time transfer the custody of any monument, or the powers they have acquired in respect to it, to any local authority of any borough or district near the locality of the monument, which local authority will then have all the power of the original Commissioners. This appears to us a very desirable provision, and might be exercised with direct reference to the enlightened interest in its antiquities which had been shown by any borough or locality; and thus a spirit of archæological conservatism would be encouraged. A very stringently-worded clause in the 18th section provides against the custody of the monument being removed out of the hands of the Commissioners, or refused to them, through any informality of any kind in the appointment of the Commissioners, through accidental vacancies in the Commission, or inaccuracy or informality in the description of the monument referred to, which in the opinion of the Court before whom the proceeding is in question is not material for the matter in reference to which it is questioned.

The same 18th clause provides that "the Act shall not be applied to any monument situate on land held in the right of the Duchy of Cornwall, except by consent of the Duke of Cornwall for the time being." The reason for this clause it is not in our province to criticise; but we should like to know the force and origin of the exception which is made, as previously quoted, in regard to any monument "situate in any park, garden, or pleasure-ground." We presume such a provision is a concession to those who would complain of the alleged tendency of the Bill to infringe private rights of property; but it is opposed to the principle of the rest of the Bill, which goes on the understanding that all these monuments are things of national value and interest; and we fear it would be very rash to conclude that a monument situate in a garden or pleasure-ground is necessarily more secure from "injury," in the sense of the Act, than one situated in a more public place.

Such is the main scope of Sir John Lubbock's Bill, which we shall hope to see pass into law, in no greatly modified form, within a short time.

What is an Architect?—A correspondent sends the following cutting from a newspaper:—"Cattle Market, Wisbech. Charles H. Blank, auctioneer, architect, and surveyor, will hold a sale for fat beast, sheep, and pigs, every Thursday, commencing at ten o'clock, and for store bullocks, sheep, pigs, and horses every Saturday, commencing at twelve o'clock.—Office, Wisbech."

PROFESSOR E. M. BARRY ON ARCHITECTURE.*

DOMESTIC ARCHITECTURE, THIRTEENTH CENTURY.

IN my last lecture I dealt with the question of the domestic architecture of the twelfth century, the style of which we may, for convenience, call Saxon and Norman. We saw that it was marked by great simplicity of general arrangement, although not without care for architectural effect, and that the latter might even lay some claim to magnificence, particularly towards the close of the century. I propose now to pass onwards to the succeeding epoch of Gothic architecture,—the golden age of the style, namely, the thirteenth century.

We shall not find the transition rapid or startling; the architectural glories of the thirteenth century grew naturally, and by degrees, from the preceding styles, and the old Norman work was of too solid a description to be easily destroyed. Moreover, the time at the commencement of the period was not favourable to the pursuit of the arts of peace. If, in the clash of arms, laws are silent, the same is also especially true in respect of the quiet progress of architecture. Without security, men will not do their best, and they can have little care for beauty in architecture when the first necessity is to procure safety for their lives and goods. Castles, therefore, and not houses, were the principal work of the unsettled times of King John. Not that ever many of these important works were undertaken *de novo*, but old fortifications were repaired and strengthened, and new defences were devised for existing structures.

It was by slow degrees that the great men of the day began to settle themselves in the country by building their manor-houses, and at first, even these were constructed so as to be capable of defence, in case of need. In the days of Henry III. and Edward I., architecture revived, and to the time of the former we ascribe that style of Pointed architecture, popularly known as Early English.

Before going into any detail respecting the forms of buildings which now came into use, we may perhaps dwell with advantage on some of the social characteristics of the country, at this time, for by such circumstances, domestic architecture is naturally influenced. The Norman conquerors had, in some measure, assimilated with the Saxons. Land, at first held by them in right of conquest, became gradually subdivided, and tenancies arose, with sufficient security of tenure, to encourage building.

Strict laws preserved indeed huge tracts of country, and hindered its settled development. An immense portion of the land was consequently covered with wood, and formed the sanctuary for criminals and lawless men of all descriptions, who lived by the plunder of travellers, and on the game which existed in abundance. Wolves and wild cattle were found in the forests, and other desolate tracts. Travelling from place to place was restricted and dangerous, and there were few who ventured to live apart from their fellow men unless they could command a following, strong enough to secure their houses from violence. Free and safe communication is one of the first signs of advancing civilisation, and we know that it has not yet been perfectly attained even in all modern European States. In the England of olden times, the roads passed through extensive forests, and none were without their history of wrong and robbery.

The Norman forest laws were of a very oppressive character, and many lives were sacrificed for what we should consider venial faults. The forests were strictly preserved for Royal use, and the day was not come when it was recognised that the people had their rights as well as the Crown. To interfere with the sport of the king was death, and the laws which preserved the forests for his use were most severe. It is a curious reflection that circumstances so change in the progress of time, that these laws [or the scanty remnants of them, which have subsisted until to-day] have lately been successfully involved in the interest of the people, against whom they were originally directed. In our more artificial state of society, the preservation of open spaces, particularly near to large towns, has become a public question of vast importance, and in recent proceedings in respect of Epping Forest, the old forest laws of the Normans have been turned to the advantage of those who desire its preservation, by the Corporation of

* Third lecture: delivered at the Royal Academy on Monday, March 12th.

the City of London, who have stood forward as defenders of public rights, in a manner very much to their honour.

Whatever value we now, however, ascribe to these forests, it is certain that, in early days, they were a serious danger to the people. Travelling was impeded, so that even the main roads near to London,—as, for example, that to St. Alban's,—were impassable in safety, without an armed escort. To meet this danger, orders were given to widen all main roads, and the bushes and woods were cut down and cleared away for 200 ft. on each side of the road. If any proprietor neglected to do this, and a murder or robbery occurred, such proprietor was to be considered responsible, even to the extent of felony.

The old Roman roads, as Watling-street, had determined the main lines of communication, and these passed, for the most part, through forests. To the clearance laws above referred to we owe the wide and ample roads in many parts of the country, with their grass sides and ample space, now too often disappearing under repeated encroachments. Agriculture is fast effacing these pleasing features. Hedges are grubbed up and palings advanced, corners are inclosed, and roads are narrowed, till they become mere passages between walls and fences. For all this, there may be economical reasons, but the lover of country beauty cannot but deplore the change. In the thirteenth century width of roads was a necessity, and we may think of this with regret, if it be indeed a necessity of the nineteenth century to narrow them.

The clergy were at the head of most of the improvements in former times. They not only held land to a great extent, through the great ecclesiastical corporations, but from the nature of their duties they were frequent travellers. To them the great fen countries in Lincolnshire, Cambridgeshire, &c., owe their first improvements. Their tenants enjoyed an immunity from the oppression and the caprice, which often pressed harcly on those who held land from individuals, and the ecclesiastical estates were consequently, as a rule, well managed and improving. Tolls were allowed to be levied for the repairs of roads, and also for the erection of walls of defence round the principal towns. A watch was kept on these walls, and a curfew bell generally rang about nine in the evening, after which time all good citizens were expected to be at home. Drinking-houses were closed at the same hour, and lodgers and strangers were obliged to give security for their good behaviour.

The Jews had obtained great wealth, and with it power and consideration, but they were, nevertheless, exposed to fierce hatreds. It was difficult for a fanatical and prejudiced population to understand that their riches were acquired by patient toil, self-denial, and ability. A simpler and more acceptable explanation was found by the ascription to them of sorceries and illicit arts. Their houses were, as has been already noticed in the case of the Jew's House at Lincoln, remarkable for importance, and we may suppose comfort; but this circumstance, doubtless, only added to the jealousy with which they were regarded. The Jews were nominally expelled from England by thirteenth-century bigotry, and carried for a time their riches and their talents to benefit other countries. The populations of our English towns were, at this time, small in number, and were sensibly reduced by the expulsion of the Jews. Certain families and localities became identified with particular industries. In this manner the Jews connected themselves with the goldsmith's art, the development of which was retarded by their banishment.

That which has been called the "organisation of labour" in modern times, was understood and practised in the Middle Ages, although not altogether in the spirit displayed by it in our own days. Each department of trade became a corporation or guild. Goldsmiths, carpenters, masons, smiths, and others, all had their separate societies and special rules. Apprentices were bound by the law, as well as the custom, of their craft. They were obliged to learn, and until they had proved their ability they could not work for themselves as regular tradesmen.

You are aware how the tradition of these things lingers among us still in the great City companies. The day for regulating trade in the improving spirit of the Middle Ages is gone, some of us may fear for ever, as we see the quaint excellences of the older work overborne by the fierce competition of the day, for multiplicity and cheapness. The companies, however, still stand out as landmarks. Some of them, at least, as the "Goldsmiths," have still connexion with the trade, and discharge certain public responsibilities, and I cannot but hope that a time may come when they may see their way to realise enlarged schemes of public usefulness, in reference to trades connected with art.

We need not trouble ourselves here with trade as far as *quantity* is concerned; that will always depend on the state of the world's markets, and our machinists are ever turning their attention to cheapness and incessant multiplication. What we do desiderate is *quality*. We wish to see art brought to bear, indeed, on common objects, made by hundreds and thousands; but in order that this may be done, there must be rewards for the patient workman, who will put his best work into all he does, and who will be proud of the quality, rather than the quantity, of the results. This is not the spirit which commands success in the close competition and higgling of the commercial market. It is one which needs the fostering care of intelligent and wise patrons, who are aware of the difficulties of the case, and are not to be led away by the capricious whims of fashion. To perform such honourable duties, the great livery companies of London appear to me to have special aptitudes. They have ample means, they have machinery which could easily be put into action, they have the steadiness and importance which are the results of their long-continued corporate existence. They are always ready in the cause of charity, and they have never been charged with forgetting the virtue of hospitality.

May we not appeal to them in the cause of art? Individual patrons, however willing, can do little, and must have but a fleeting influence; but I cannot conceive any object to which a portion of the great influence and resources of the City companies can be more usefully directed in the public interest than that of fostering the arts of their time, more particularly with reference to the special trades with which they are assumed to be connected, but from which they are too often divorced.

I believe great public advantages might be found to spring from a renewal of old ties. We live in times when the right of association has been definitely recognised, and when it is consequently spreading and gaining power from day to day, and it would, I think, be a clear gain to the community if we could point to trade companies, which, while upholding the dignity of commerce, would dwell upon the *duties*, as well as on the *privileges*, of labour, which would encourage art and reward excellence.

We know little of such influences now, and when we speak of trades and guilds which prescribe working rules, settle wages, and the like, we naturally think only of the modern Trade-union, by means of which the workmen gain in power by association for common objects. Scarcely a day passes that we are not called on to notice the action of these societies, and not always, it must be said, can we approve of them. No one now-a-days would contest the right of working men to form themselves into societies for the protection of their interests; but as these societies become matters of public importance, they must expect to be subjected to free criticism, and the people at large may ask the question, "Do they conduce to the public good"? All must sympathise with the honest efforts of a class to raise itself in the social scale, but we cannot believe that the right manner of seeking this laudable end is to damp the ardour of individuals; to discourage special skill; and to dream of an equality which has never existed, and can never be called into being.

The guilds of old were as careful of the interests of their men as the trade unions among ourselves can be; but the rare beauty and excellence of their work suffice to show the spirit of their rules. An apprentice had really to learn his trade, and to excel in it. He then advanced in its ranks, and ultimately became the master workman. In that capacity he dealt directly with his employer. There were no great contractors or middle-men. Huge and rapid undertakings were unknown. There was time and opportunity for the workman to take pride in his work. A rich man would take his gold to the goldsmith, who would fashion it for him, and have it guaranteed by the mark of his company. A monastery, or a great lord, who desired to build, would fell his timber and quarry his stone. He would then seek the master workman, who would find the labour and trade skill. Work was not so plentiful that his subordinates could lightly quarrel with him, and strikes, at least on a large scale, were not as yet a feature in the annals of industrial art.

It cannot be disguised that artists have much reason to look back at these things with wistful eyes. Our workmen pride themselves, and, I believe, on the whole, justly, on their skill and good sense; but we have, nevertheless, but too often to deplore the rough and careless manner of work which has become the ordinary custom of our time. The architect is the true friend of the workman, anxious for his well-being, glad to welcome his social rise, and without opposing interests. It is not his place, therefore, to utter smooth things, but to tell the truth, and in this spirit to point to the decadence of artist-like spirit and thorough execution in the common work of the day. It may be well that trade unions should busy themselves with the wages and privileges of their supporters, but the friends of our workmen would feel more hopeful if they heard more from those societies of the duties expected from them; if they found them the nurseries and loving mothers of genius; if they saw that the obligation was recognised that to earn justly a "*fair day's wage*" there should be a "*fair day's work*."

To return now to the question immediately before us. We shall find that timber was still largely used in private houses, stone being then, as now, a luxury of the wealthy. A wooden hut was for a long time the type of domestic buildings; and excepting where more solid materials were rendered necessary for safety in disturbed parts of the country, it was commonly employed for all the minor structures of the time. The great nobles, the archbishops, and abbots might, indeed, indulge a more costly taste, but lesser persons had to content themselves with wooden constructions. Brickwork was not yet common, and few early examples of it remain.

By degrees, the various materials were mixed in the construction of the same building, so that the upper part of the house would be of wood, and the lower part of stone. In such cases, the latter was contracted, as much as possible, from motives of economy, and the upper stories were projected over the substructure. It was easy to make the floor-beams longer than the rooms below them, so that their ends should project. Space was therefore gained in this way, and the lower part of the house was sheltered, and kept warm and dry. The same mode of building is followed in Switzerland and other mountainous countries at the present day, and you have doubtless often been pleased with the picturesque arrangement of outside stairs, balconies, and overhanging galleries, which such a method of building favours. We find it in some of the old inns in this country, and not long since Southwark could boast several good specimens of the class, now I fear gone, with other relics of a similar kind. An enormous number of such structures were swept away by the Great Fire of London.

The spaces between the wooden frame-work of the walls of timber houses were filled in with a plaster, of lime, sand, or mud, mixed with straw to ensure its keeping together. This was generally laid on laths, after the usual manner. Many wooden manor-houses built in this way are very picturesque, and some counties still abound with them. The roofs were of high pitch, and the chimney often took the form of a central shaft, or cluster of shafts, thus avoiding danger from fire to the wooden walls, and concentrating the heat where it was most wanted, namely, in the middle of the house. I cannot pass from the mention of this arrangement without noticing with regret a too common habit of designing chimneys in the external walls, a plan which often sacrifices the comfort of the inhabitants to an assumed necessity for picturesque design. In good houses, with thick walls, and where solidity and substantial construction have been more esteemed than cheapness, the architect may fairly employ a mode of design which he may think adds piquancy to his elevation, and often convenience to the plan; but, in other cases, external chimney-shafts are not to be commended, as I am sure many an occupant of a country parsonage, or ville, in the building of which economy has reigned supreme, has had occasion to discover.

In the manor-houses of the thirteenth century, the hall maintained the place which it had hitherto held. Here, the lord received his tenants and neighbours, here they feasted, here also, they often slept; and around the hall gradually arose the more complicated arrangements of later times. The mode of life in the

manor-house differed only in degree from that of the king's palace, and in Westminster Hall we have a splendid example of an "aula regis," or royal hall. The hall was surrounded by a spacious enclosure, in which were the kitchens and other offices. On great occasions, as at coronations, the space was nearly filled by temporary erections, built to accommodate the overflowing number of the visitors. The hospitality of the time forbade that any should be sent away empty, even if there had been inns for them to go to, which was not the case. If the great hall were not sufficient, other smaller halls were erected around it, and kitchens built for their especial service. Westminster Hall had not, of course, its present appearance in those early days. It was first built by William Rufus, and must have been, even then, a building of great magnificence, as is shown by the remains of Norman architecture now built in the thickness of its massive walls. These remains were seen to advantage when the great archway leading to the Houses of Parliament was pierced in the southern end wall of the Hall. The great enclosures which surrounded the hall were necessary for defence, and visitors with their retinue, horses, and servants, had all to be provided for. This was no slight matter in days when a great nobleman would take in his train 150 to 200 horses, with the necessary attendants, besides an armed escort.

Although we now begin to find traces of a desire for more comfort than was sought in previous times, it was only by slow degrees that matters which we think essential were adequately attended to. Thus glass windows were for a long period rare, and costly; so that even in large houses the upper lights were often the only portions glazed, while the lower lights were closed with wooden shutters, after the ancient manner. The art of glass-making was not unknown to the Romans, as I pointed out to you when describing the houses at Pompeii. It never was lost in Italy, and was freely used there before it became common in this country. During the recent modern revival of taste in Italian art we have seen a revival of glass manufacture in its ancient seat of Murano, whence came the glass used in many of the chief buildings of Italian Mediæval days. In Britain the Romans may possibly have imported glass in small quantities, and used it in a very sparing way; but it is obviously unlikely that this could have been done on any large scale, considering the difficulties of transport and the nature of the material.

These circumstances will account for the scarcity of glass in this country in the thirteenth century. The French, and the inhabitants of the Low Countries, or Flemings, seem to have had greater skill than our ancestors in making glass, for it became a regular article of trade with those countries, as well as with Venice, the latter place being chiefly resorted to for drinking-cups, and vessels of an ornamental character. Window-glass came chiefly from the Flemings, with whom extensive commercial dealings had sprung up in connexion with the wool trade. The latter was a very important industry in this country, and our merchants sent wool to Flanders in large quantities, and took as part payment window-glass in exchange. Among the trades of the time we find occasional notice of that of the "glasier," but there is no mention of that of the glass-maker.

Such being the state of the market for this important item of the builders' materials, and the difficulty of procuring it, glass made its influence felt but slowly in domestic buildings. The churches, the royal palaces, and the great religious houses, had to be supplied, before the manor-houses of the gentry and less important buildings could have their share in the improvement. Wooden shutters were, therefore, still common, and cases exist where the stone mullion, which divides the opening into two lights, is pierced with holes, through which the bars were passed to secure the shutters at night. It may easily be supposed that such shutters did not close the windows very thoroughly, and that draughts of cold air abounded. Even the queen of Henry III. was not exempt, it would seem, from this inconvenience; for there is a record of an order from the king directing glass to be placed in the window of the queen's wardrobe in the Tower of London, instead of wood as then existing, "so that that chamber might not be so windy."

The walls of this period being usually thick, there was ample opportunity for placing shutters either within, in the thickness of the wall, or outside. Both methods were common. In the interior, as I have before pointed out in the case of earlier examples, the window-sill was commonly formed with a seat, sometimes a plain bench of stone, and at other times more elaborately arranged with returned ends and mouldings. This treatment of the sill is almost universal in dwelling-houses, and serves as a distinguishing mark between ecclesiastical and domestic work.

The ordinary type of window was the two-light form, common with the Normans, and divided, as in that case, by a column or shaft. The roofs were covered with stone, tiles, and slate, and still occasionally with thatch or shingles. Crest ornaments began to appear on ridges, and hip-knobs and finials were also seen. Stone gutters, sometimes covered with lead, carried the water to projecting spouts, which developed into the quaintly-carved gargoyle.

In the interior of their houses, the thirteenth-century architects soon turned their attention to the fire-places. These, however, were far from universal, as the old custom still remained of having a hearth in the middle of the apartment, with openings in the roof over it for the passage of smoke. It must be remembered, in estimating the inconvenience of this practice, that the fuel used was wood, and not coal, with its black and blinding smoke. The arrangement of a central fire was general in kitchens, and was often used in halls and other large rooms. As, however, the convenience of a regular chimney became apparent, we find great attention paid to the design of the fire-places. These are often richly carved and ornamented, and the practice continued until the latest times of Gothic architecture. After the latter had become merged in the Renaissance, the grandeur of the chimney-pieces still increased, and some very handsome examples are found in the Elizabethan and Jacobean mansions of England, and also in France and Belgium.

There is something hospitable-looking in these great recesses, which gives a significance to the phrase of welcoming to the "hearth." In the architecture of the future, there may be a change, but the artist has little reason to wish for it. At the same time, we cannot shut our eyes to the fact that wasteful fire-places cannot always be a feature in our domestic economy, more particularly in respect of the homes of the poor. It has been urged that our pleasure in seeing a fire in our rooms is chiefly due to the inefficient warming and ventilation of the latter. If a man feels warm, he does not think of a fire, or expect to see one. With November chills, we look at our cold grates, and wish to see a bright fire burning in them. We say it is cheerful-looking, and pleasant; but the very same object would be disgusting to us in the dog-days. We approach the fire, and gather round the hearth, because we are cold; and a chief reason of this is, that a large portion of the heat produced by the fire goes up the chimney, and the rest is so partially distributed, that one part of our rooms is as much too hot as others are too cold. Owing to the Englishman's affection for an open fire, and also to his conservative instincts in matters of habit, it is not probable that fire-places will soon disappear from the homes of those who can afford to indulge their tastes; but as our coal supplies approach more nearly to exhaustion, and fuel becomes dearer and dearer, it may well happen that architects will be forced to turn their attention to the substitution of other arrangements for the open fire-places, which have been handed down to us from our ancestors. There is no doubt, however, that in dispensing with them we shall lose a very striking and beautiful feature of architecture, and we can only hope that the change, if it come to pass, may be attended with compensations in the way of increased cleanliness, brightness, and comfort.

In continuing our architectural retrospect, it must be remembered that we have not yet arrived at a time when security against external danger could be relied on, and many details of the castellated architecture of the preceding century were still common. Such are the battlemented or crenellated walls of enclosures, and also parapets, and the external flights of steps by which the upper stories were often approached. Staircases, as we understand them, came into general use at a later period. The interior walls were commonly plastered and whitewashed. Sometimes a simple decoration might be added, and the custom of lining the walls with wainscoting arose, although this was very sparingly used at first, in consequence, doubtless, of its great expense.

Wooden floors were occasionally found, though not often on the ground story. The floor was more generally left with the earth pounded and rammed down, and covered with straw or rushes. Paving tiles of a plain character were used during the reign of Henry III., who was anxious to promote the progress of art, and encouraged foreigners to attend his court, and to introduce improvements from abroad, when practicable. The earthen floors, saturated with moisture, and receiving all the litter from the tables, must often have offended a fastidious taste, and royal orders exist, one of which directs that a room on the ground floor of Windsor Castle shall be "boarded like a ship," while another says that the "clerks of works" are to work day and night in order to wainscot another chamber "with boards radiated and coloured, so that nothing might be found reprehensible in that wainscot."

It was at this time that Italian priests were often to be found in England, in places of importance; and they must have brought with them the taste for coloured decoration, common in Italy. Polychromy, in consequence, became readily adopted in English work, and wainscots, walls, and ceilings were frequently painted, the subjects being chiefly allegorical, or taken from the sacred history, or the lives of the saints, and executed by the same artists whose works adorned the churches. Although the art may have been first introduced from abroad, there must have been plenty of skill among English decorators, or the fashion of polychromy could not have been so extensively followed as was the case. At St. Alban's, the Sacristan Walter, of Colchester, an Englishman, was an expert in such work, and is described in the chronicles of the period as "pictor et sculptor incomparabilis."

It was usual to paint the walls above the wainscoting, and it was not until a later time that the latter was carried up to the ceiling, as we see it in many Elizabethan houses. The wainscot being about 6 ft. in height, there was a good opportunity for the painter to decorate the wall above it, which was done sometimes by representations of curtains, and sometimes by more ambitious designs. Thus, we find King Henry ordering Walter de Burgh to build him a chapel at his manor of Cliff, and "to cause the chamber of our queen there to be wainscoted, and painted with a history." Another royal mandate directs the sheriff of Wiltshire "to wainscot the king's lower chamber, and paint it of a green colour, and put a border to it, and to cause the heads of kings and queens to be painted on the borders." He was also to paint on the walls of the king's upper chamber with the story of St. Margaret Virgin, and the four Evangelists; and to paint the wainscot of the same chamber of a green colour, spotted with gold, and to paint on it heads of men and women." The order concludes by saying that all these paintings are to be done "with good and exquisite colours."

These extracts (for which I am again indebted to Mr. Parker) will suffice to show the extent of the taste for polychromatic decoration, which had now come into use, and had spread from the churches to the domestic architecture of the day. They also enable us to appreciate the interest taken by King Henry in the architectural improvements then in progress. His orders are most precise, and extend to the smallest details: thus he tells the constable of the Tower of London, in one instance, that he is to have the walls of the queen's chamber, which is within his own chamber, washed and painted with flowers; he is also to cause the drain of the king's private chamber to be made in the fashion of a hollow column, as "our well-beloved servant, John of Ely, shall more fully tell thee."

The king is thus shown to us directing the building, decoration, and detailed arrangements of the royal palaces. He encouraged artists at his court, and carried out large works at Westminster, both in the abbey and the palace; he attended personally to the repairs and enlargements of the various Crown buildings throughout the country, and assisted in the improvement of the parish churches, these being undertaken by the clergy and the local authorities. We find his favourite style of decoration is that mentioned in one of the above quotations, viz., green, with gold stars, and this fashion has been ascribed to the taste of William the Florentine, an Italian artist, much employed by the king. This man was also an architect, and held the office of "master of the works," at the palace at Guildford.

The houses in towns were still low, seldom having more than two stories; but the king was anxious to increase their height and importance. He was struck with the effect of the architecture of Paris, in this respect; for, after he had paid a visit to that city in 1254, we find it recorded that, "when the King of England had passed through the street which is named La Grève, and afterwards the street towards St. Germain Antin, and then the great bridge, he observed the beauty of the houses, which are built of gypsum, or plaster, in the city of Paris, and houses containing three chambers, and some even of four stories or more, from the windows of which stretched forth a countless multitude of people of both sexes."

As regards this comparison with Paris, it may, however, be remarked that, in many important particulars affecting the health and comfort of the people, London, in the thirteenth century, had some points of superiority over its rival, which remain, more or less, to the present day. Thus the streets were wider, the pavement better, drainage less imperfect, and the lowness of the houses more conducive to the general health, by allowing a free passage of light and air. As regards this last matter, I cannot but regard with anxiety the present tendency to increase the height of our buildings indefinitely, each wishing to take his own course, regardless of general architectural effect, and of these important sanitary questions of which I have spoken.

In England the attention given to these matters by King Henry illustrates the advancing civilisation of his time, and we find water was laid on at the Palace of Westminster by his order. A special favour was in this instance granted by the king to the architect, Edward Fitz Otho, for to him permission was given to have a pipe, the size of a quill, to convey the water from the conduit to his own dwelling-rooms. Towards the close of the century baths were introduced in some of the chief palaces, and conduits of pure water conveyed a benefit to the citizens which they do not unfortunately always enjoy in our own day.

The drainage of houses was, for a long time, of the simplest description; the water dropped from the eaves of the roof, and open channels carried off, more or less imperfectly, refuse of every description. Underground drainage was known to the Romans, as the splendid remains of the "cloaca maxima" at Rome abundantly testify; but in England it does not seem to have been practised before the thirteenth century. As hamlets grew into villages, villages into towns, and towns into cities, the inconvenience of primitive arrangements became manifest, and a more complete system of gutters, pipes, and drains came into prominence.

In the Royal Palace of Westminster, we find there was an open channel for drainage, down the middle of the hall itself. This becoming intolerable, and affecting the health of the courtiers, the king ordered its immediate removal, with other sanitary changes, and, to press the matter, named an early day for the completion of the works, declaring that they must be done, "even though it should be necessary to hire a thousand workmen a day" for them. An underground drain was provided, in consequence of the king's order, so as to communicate with the Thames, and in the order for payment we find 126*l.* 17*s.* 8½*d.* were expended on the work, which included the repair of the kitchen chimney. The new drain is termed a "conduit," and it is stated that the king ordered it to be made "on account of the stink of the dirty water which was carried through his halls, which was wont to affect the health of the people frequenting the same halls."

I have brought this particular instance before you, because it seems to show two things: first, the condition of such matters at the time; and, secondly, the reforming spirit which was arising, and which was fostered by the royal example. When kings' palaces had open drains in their very halls, you may easily picture to yourselves the condition of humbler dwellings; and, on the other hand, in the complaints which now began to be heard of these primitive contrivances, we discern the advent of that spirit of healthy grumbling, which heralds the approach of improvement. In the orders of Henry, and also of Edward I., there are frequent references to such matters, all of which prove that the attention of the most enlightened part of the community was becoming convinced that the time was come for an advance on the customs of their predecessors.

Let us now see what changes have been silently growing in the forms of architecture since the days of the Normans. The style of the thirteenth century is perhaps best known to most of you by the term Early English, as used by Rickman. Other names have been given to it, as, for instance, First Pointed, and the style has again been sub-divided into epochs; but it is not necessary for my present purpose to trouble you with their refinements, and it will suffice for us now to regard the style which we are considering under its old-fashioned title.

You will remember that we found the characteristics of Norman work to be solidity and simplicity, not without considerable richness of surface details. We now find greater lightness, both of effect and of materials used, more deeply cut mouldings, and more elaborate construction. The semicircular arch had given way to the pointed form. Both kinds were used in the same building, until ultimately the latter secured an exclusive predominance. The gain in freedom of construction from the introduction of this feature soon showed itself in the greater extent and beauty of the groinings and vaultings. The favourite shape of windows in domestic work remained, as hitherto, the two-light type, and the opening was frequently divided by a column as in Norman examples. This use of the column is of great antiquity, and is found in Byzantine works; it was commonly used by the architects of the thirteenth century, not only for the openings of windows, but also in the case of doorways, which were frequently divided by a single column, or by a cluster of shafts, as at Southwell Minster, and elsewhere. In the case of doorways used by large crowds, this arrangement of a central pier would not be without its convenience, if advantage were taken of it, to divide ingress from egress.

It was in the column, however, that the greatest change had taken place. Shafts of moderate size, clustered, and sometimes banded together, now supplied the place of the sturdy Norman pillars, and the traces of classical traditions disappeared from the capitals. Volutes and the square abacus were dispensed with, and a conventional foliage of singular beauty replaced the leaves which evidently recalled memories of the acanthus. The bases, on the other hand, while becoming more elaborate, are not without a resemblance to the Attic base of the Corinthian order. Both bases and capitals were deeply cut with hollows, and these were divided from the round mouldings by small fillets. The same characteristics marked the arches of the period, and powerful effects of light and shade were freely used.

The most widely-known detail of this period is that known as the dog-tooth ornament. It is one of great beauty, and is so well known that I need not describe it. We have already noticed the frequent use of zigzags by the Normans, and there can be little doubt that on them was founded the design of the dog-tooth. It is, in fact, only a double zigzag, carved into leaves. It is found in every detail of the time,—in arches, capitals, string-courses, corbels, and the like; and in examining ancient buildings it is a good rough-and-ready test of the period of which we are now treating. In the greater churches more ambitious sculpture now came into use, of which the cathedrals of Lincoln and Wells are splendid examples, and in all the work of the thirteenth century there is evidence of beauty of design and skill of execution, which was not of long duration, and has marked out the period as the golden age of English Gothic architecture.

The windows were often combined in groups of two, three, or five lights. The arrangement of three as a triplet, with a longer light in the middle, is the ordinary form, of which we have good examples in London, at the Temple Church. Other fine groups, as that known as the five sisters at York, may also be noticed. Window tracery did not come into general use till a later period, although, as we see from the Southwell example, it must have have been well known. The windows were for the most part long openings, without mullions, and terminated in a single-pointed arch, sometimes cusped, which has given rise to the name of Lancet. The above are, I think, the principal points to which I need draw your attention before we consider the architectural differences between the domestic buildings of the thirteenth century and those of the Normans, discussed in my last lecture. The changes I have noticed are, of course, only the most obvious and salient points of difference, and you will readily notice in your study of examples, the many smaller matters of detail which accompanied the more important variations. The style was complete before the century had far advanced, and its later specimens indicate that a transition had already begun, and that new changes were imminent.

Among the examples of domestic architecture before alluded to, Aydon Castle, in Northumberland, is worth attention. It was not originally termed a castle, according to the semi-royal custom of the day; but it was intended primarily for a residence, and was called "Aydon Halle," thus following the usage which usually prevailed as regarded the manor-houses and residences of the gentry. At the same time, as the building is near to the Scottish frontier, and is situated in the debatable and unsettled Border land, we may naturally expect to find that capability of defence was not overlooked. It is placed, therefore, on an eminence, with no windows within easy reach, and with those which were necessary few and far between. Battlemented parapets surround the roofs, and provided shelter for the archers in case of need. The house stands in a considerable enclosure, which would serve as a defence to servants and cattle in case of a siege or sudden attack. The nature of the ground protected the enclosure on two sides, and on the others there were ditches at the foot of the enclosing walls.

There is nothing architecturally grand in this example, but it may interest us as a specimen of a fortified house of the Border country. It possesses great strength of construction, and the mangers in the stables, even, are of stone. It is noticeable that fireplaces are here freely used, and no doubt for this circumstance the climate, and the facilities for procuring fuel, may be answerable. These fireplaces are of simple, but good design, and in one instance there is a projecting shelf supported on brackets. In this case the fireplace and hearth are built in the thickness of the wall. In another instance, shafted jambs are built against the wall, and project into the room, while over all there is a covering hood, tapering upwards. The chimneys themselves are for the most part carried up singly, in plain solid-looking shafts.

The water is conveyed from the roof by stone gutters, behind the parapets, and there are stone projecting shoots, or gurgoyles, to take the water from the gutters outwards. The principal rooms for the family are on the first floor, and they are approached in the manner usual in castles, by a long flight of external steps, originally covered by a wooden roof, which has now disappeared. The windows to the chief rooms are of the ordinary two-light type, with a dividing column. Each light has a plain pointed arch, and the two openings are surmounted by a pointed arched dripstone, or label moulding. Holes in the masonry around the windows suggest the existence of iron bars, now removed. The window column, though more sturdy in its details than is usual in Early English work, is yet quite distinct in its character as compared with the Norman feature of the like kind, which we saw in the case of the Jew's House at Lincoln. You may compare with interest the greater decoration of the latter town residence with the simple but handsome strength of the castellated country mansion of Aydon.

Before quitting the latter, a word may be said about the doorways. The principal entrance at the top of the flight of steps before mentioned is finished with a pointed arch of simple character, with double-splayed jambs. As this entered into a story of considerable altitude, no question would arise as to the height of the arch, but it was otherwise in cases of more moderate dimensions. It is curious to notice how early our ancestors discovered this difficulty in the employment of the pointed arch, and you will observe in one of the doorways the use of a square lintel, with the upper part of the jamb carving inwards; a design which was capable of much greater development. The same square form was also used for window openings when required, and there is an example of this feature in the same building. The thirteenth-century architects knew that good architecture should be governed by common sense, and while clinging to the pointed arch with the utmost affection, they thus early recognised that there were limits to its reasonable application, and that there is a time and place for everything.

It must, of course, be remembered, in considering the examples of thirteenth-century domestic architecture, that from the nature of the case we are only dealing with houses of importance. The dwellings of the people at large,

having been chiefly of wood, have naturally disappeared. If the arrangements of the houses of the rich are to our minds far from luxurious, we may be sure that the poor had little comfort in their ruder dwellings.

We shall find that in the South of England, as well as the North, the houses of the gentry still partook of the nature of castles. Little Wenham Hall, in Suffolk, is a good example of this habit, and it is notable because the materials used are different from those employed at Aydon. Here we find brick walls, built of long narrow tile-bricks, of the Roman fashion. The bricks are mixed with stone for windows and dressings. In this part of the country, there was not the same necessity to provide for the possibility of a siege that existed in the Border land of the North. There was, therefore, no great extent of enclosure-walls, and the plan was in consequence more compact, although with strength enough to resist any isolated attack, whether by pirates, or migratory bands of robbers.

Most manor-houses of the time were built with regard to such possibilities. At Little Wenham Hall, the sterner features of Aydon are softened, and a greater amount of decoration is introduced. Some of the lancet windows have trefoiled heads, and tracery is found in the two-light windows. A turret, at the angle of the tower, contains a newel staircase, and there is a chapel in the tower with some good architectural details and carving.

Taken altogether, we find in this southern example a certain progress towards refinement, due probably to the more settled state of the country, and to the somewhat more genial climate. At the same time, the character of a fortified house is well maintained. A more domestic-looking relic of the time is to be found in the old Rectory House, at West Dean, in Sussex. As this is situated close to the church, it was, no doubt, erected for the use of the clergy, and hence it dispensed with those precautionary measures which were still thought necessary in the manor-houses of the laity. It is a plain and simple building, with a high-pitched roof, but with little or no architectural ornament. The massive square chimney is in the gable, and the roof is covered with slabs of stone, with dripping eaves. There is a good two-light window in the upper story, with a columnar mullion. Each light has a trefoil head, worked above the opening for the casement. The latter is finished square, with a stone lintel.

Although there is not much to interest us in this building, taken by itself, it may serve to show to a greater degree than the other examples what less pretending dwellings of the thirteenth-century were like. Even this house, it may be remarked, was of stone, but the features of its design are simple, and just such as might be expected to occur in the more common wooden structures of the period. In it we seem to have a residence of one who from his poverty feared no robber, and whom his sacred character protected from violence. He was, therefore, enabled to live in a house which was not a fortress, but which might pass for a cottage in our own day.

In parts of the country where water was easily attainable, we often find a moat surrounding the house, with a drawbridge to the principal entrance. The moat supplied the place of a protecting wall, and although it could scarcely have been of great use in the event of serious attack, it would probably suffice to keep off any wandering bands intent on plunder or ransom.

It need scarcely be pointed out that all houses of importance in the thirteenth century possessed their domestic chapel. The orders of Henry III. are full of minute directions about the "Queen's Chapel," in the various Royal residences, detailing what is to be done for their maintenance and decoration, and in some instances ordering the sheriff to supply a chalice, vestments, books, and other necessary ornaments. The custom of the palace was the same as that of the manor-house, in this as in other matters, and thus the chapel came to be considered as an almost necessary appendage to private houses of importance throughout the country.

There was not much furniture in the houses of our ancestors, at least in our acceptation of the term. That which was required was, for the most part, made on the spot by the carpenters and workmen of the estate. The windows had stone benches, and there was a dais for the king, or lord; of movable furniture there was little or none; massive fixed tables were common in the hall, and sometimes trestles were used, on which moveable tops were placed for meals. The tops often consisted of boards, roughly fitted to each other, and under these circumstances the phrase to "board," acquires a special significance. Forms and benches furnished the seats, and possibly served also as couches, the hall being still often used as a dormitory as well as a dining-room.

The king's seat, in important palaces, had usually some importance of design, being of stone or wood, with a canopy, and decorated with carving, painting, and gilding. Movable chairs were in occasional and rare use. Curtains may have covered the doors, and also ornamented the royal canopies, but they were not common until a later period. This was doubtless by reason of their cost, for they were evidently well known to the artists who carried out coloured decoration, one of whose favourite subjects was a painted curtain, with stiff folds.

With regard to beds, there is not much information. Bed-chambers existed, but the provision of them was scanty, even in great houses. Mattresses were, however, in ordinary use, and those of the king were covered with silk, velvet, and embroidery. The people generally appeared to have laid out their mattresses where convenient, instead of placing them in bedsteads, in the modern fashion. The love of linen which has distinguished careful English housewives, to the present time, became early apparent, and the large presses and cupboards were well filled. To "take up" one's "bed and walk" was, as we know, the custom of the East in Gospel times, and it is so still in Eastern countries, and to some extent in Russia.

The great houses were lighted with candles, and silver candlesticks appear in the inventories of royal goods and chattels. They were, as we know, one of the indispensable ornaments of the altar. Wooden bowls and trenchers sufficed for general use at table, and the meat was often brought to the hall, on the spit, fresh from the kitchen fire. Each guest carried his knife, and helped himself, as the spit was brought within reach. Forks, although known, were looked upon as luxuries or curiosities, and the meat was cut up by each person on his trencher-board, and eaten with bread. Spoons were used occasionally by the wealthy, and possibly forks also, but the latter were the less common of the two. There were often mats for the feet, when the floor was of earth or tiles.

These details of the mode of life in the thirteenth century relate to the habits of the rich, for even kings in those days were without comforts, which we now think indispensable for all classes. The mass of the people had to be contented with simpler arrangements, and rougher living.

This, however, was the time when our English Gothic architecture achieved its greatest perfection. Artistic feeling applied itself in after-times more vigorously to the private wants of men; but these were the days of palaces, abbeys, and churches,—of the glories of York, Lincoln, and Salisbury. If the days of such architectural triumphs seem to some of us to be gone for ever, we may, perhaps, feel some consolation in the thought that each age has its own special work. The world, as it grows older, takes more and more into account the necessities of its humblest members, and so, in our work of to-day, we may find much to interest and instruct us, though little to be absolutely copied, in the domestic architecture, habits, and ways of the thirteenth century.

City Temple.—Sixteen memorial windows have been executed in coloured glass for the clearstory of the City Temple, by Messrs. Phillips & Son, of Baker-street, from designs by Mr. Walter Hensman. Half of the number are filled, each with an emblematical figure of one of the eight Christian virtues,—Faith, Hope, Charity, Truth, Wisdom, Temperance, Chastity, Patience. They are depicted as winged figures, four being male and four female. The figures are seated, half on either side, occupying the second, fourth, fifth, and seventh windows. Each pictured grace is regarded as a memorial of some great name associated with the history of the Congregational church now worshipping in the City Temple,—Truth, for example, as commemorative of Thomas Goodwin, Cromwell's chaplain, its founder, or with the triumphs of the Reformation in general. Thus Cromwell himself is taken as the type of Temperance; Baxter, of Patience; Bunyan, of Charity; John Wesley, of Faith, and his brother Charles, of Hope; Milton, of Wisdom; Anne Askew, the Smithfield martyr, of Chastity. The other eight windows are for the present filled with floral ornamentation only.

SOME CIRCUMSTANCES WHICH INFLUENCED MEDIÆVAL ARCHITECTS IN THE ARRANGEMENT OF THEIR BUILDINGS.*

THE difficulties which present themselves to an architect when he is about to erect any building may, I think, be ranked in two classes,—firstly, those which will be brought about by practical considerations; and secondly, those which arise from artistic requirements.

In the former class may be ranked site, cost, materials to be used, arrangement, accommodation required to be provided; and in the latter class, selection of style, appropriateness to the locality chosen, proportion and enrichment. I do not, of course, intend, in this paper, to enter into the consideration of all these questions, but simply to describe some ancient buildings or groups of buildings which seem to me to illustrate in a remarkable manner the way in which your Mediæval predecessors either overcame some of these difficulties, or attempted to do so. If I have in the course of this paper to draw comparisons between their practices and some that are in vogue at the present day, I hope I may be pardoned if I sometimes express an opinion in favour of the "ancient ways," rather than the modern.

The first point upon which I wish to offer a few remarks is the way in which Mediæval architects treated the sites of their buildings. It seems to me they nearly always erected their buildings upon the ground just in the state in which they found it, and did not go to the trouble, and often unnecessary expense, of "levelling." One of the grandest examples of the way in which Mediæval architects treated a thoroughly unlevel site is the great Abbey of Mont St. Michel, in Normandy. Here all the buildings are made to fit into the irregularities of the great granite rock; each crag is made to form the foundation of some buttress or projecting turret, and each hollow forms a crypt. On the summit of the vast granite cone stands the magnificent apse of the abbey church, surrounded by a forest of pinnacles. So grand and striking is the whole mass, and so inseparably united are the buildings and the rock upon which they stand, that it is difficult to distinguish where the work of nature ends and that of man begins.

Another grand example of the same kind of treatment is the cathedral and surrounding buildings at Limburg-on-the-Lahn; here the size of the cathedral is very circumscribed, owing to the small space at the top of the rock upon which it stands, but in order to give dignity and grandeur to the whole group, the beautiful church is crowned by seven spires, the one capping the central lantern rising far above all the others. At a distance both Mont St. Michel and Limburg bear a striking resemblance to some great dolomite rock. In each case the peculiarities of the site are strongly accentuated and exaggerated by the buildings erected upon them, and both look far steeper rocks when crowned by their beautiful churches than they would without them. There are many other examples of the same striking treatment of hill-sites to be found all over Europe. In Germany, Dietkirch, near Limburg, is one of the most remarkable; Friesing, Naumberg, and Erfurth are scarcely less remarkable. In England, the castle and cathedral of Durham are splendid examples, and must have been still more so when the western towers of that cathedral were crowned with spires. In treating one of these grand hill-sites, the Mediæval men carefully avoided anything that would have the effect of marking the junction of the hill or rock with the building placed upon it. They very rarely used terraces, and when they did use them they reproduced or continued the vertical lines of the building below the terrace, so that, at a little distance, the terrace looked like a part of the building. Great care was taken that the building should appear to grow out of the hill, and not merely stand upon it, and in order to do this portions of the building were carried down the rock or hill or portions of the rock left running up into the building, which had the effect of broaching the two together in an inseparable union. Now I must say that it appears to me that this is a far more beautiful treatment than that usually practised in modern times. As a rule, if a building has to be erected upon a hill, the first thing that is done is to remove the greater portion of the hill so as to get a flat top to it. There is no longer any

* By Mr. H. W. Brewer. Read at the Architectural Association on the 9th inst.

question of the prophet going to the mountain or the mountain going to the prophet, but of the mountain getting out of the way to make room for the prophet. Another practice which is very common is that of surrounding a building erected upon a hill with a broad flat terrace, forming a strong line of demarcation between the two, which makes the building look as if it could be lifted off the hill bodily just as one lifts the cover off a soup-tureen. The modern castles of Callenberg and Hohenzollern have this defect in a painful degree, and I have often thought that a vast handle ought to be constructed over them, so that one might imagine some giant coming and lifting them off the beautiful hills which they disfigure, and transporting them to some flat level marsh, where they might really look rather ornamental.

The same practice of placing their buildings upon the site just as they found it, and of making the building suit the site and not the site suit the building, often led Mediæval builders to place their churches upon a lower level than the road from which they were to be entered. Examples of this are to be seen in the cathedrals of Chester and Norwich. When entering either of these cathedrals by the western door, one has to descend a flight of steps to the nave. The cathedral of Friesing, in Bavaria, presents a singular example of this, as the narthex and great western door are very nearly upon a level with the triforium. At Würzburg, in Bavaria, the church of St. Burkard is built upon a level site, but the chancel has to cross a street, and the west end of the nave goes over a stream. Now, instead of raising the whole floor of the church to one level, which would have cost much labour and a large sum of money, the nave is built upon the ground level, the choir raised upon a grand flight of steps, and the west end of the nave raised so as to form a deep gallery. The Rath-haus at Dettelbach, in Bavaria, has a road running through it lengthways, and a river crossing under it at right angles, so that the ground floor is cut up into four equal isolated portions. The way in which the entrance to the upper portion is effected, by means of a double external staircase uniting under a vaulted porch, with a chapel above it, is one of the most charming pieces of design I have ever seen, and shows how the Mediæval architects made beauties out of the very difficulties of the sites upon which their buildings were erected.

The next point which I have to notice is one which seems to me to lead to many difficulties, sometimes not unmixed with unpleasantness, and one upon which I find architects and their clients frequently have very different views. It is the *cost* of the building. A curious instance of the way in which architects and their clients differ upon this subject came to my notice a short time back. A talented young architect, whom I have the honour of knowing, was commissioned to design a large church in one of our Northern counties. He got out his drawings and his estimates, which came to 10,000*l*. The building, having to hold a very large congregation, was necessarily plain, and built of brick with stone dressings. He received a letter from his client, stating that he was delighted with the design, but he wished to have the building of ashlar, and thought that it ought to be done for 7,000*l*.! Now, although I do not suppose for a moment that Mediæval architects had quite such unreasonable clients to deal with, inasmuch as the disease, which I can only describe as "shoddy on the brain," was not common to the alarming extent which it has become in this nineteenth century, yet that the Mediæval architects did experience this difficulty is amply proved by the frequent examples which we meet with in old buildings, of the well-known process of "cutting down."

One of the most remarkable instances of this is to be seen in the nave of St. Alban's Abbey; and the whole question, so far as that magnificent church is concerned, has been most carefully examined and reported upon by Sir G. G. Scott. I will, however, say a few words upon two singular Continental examples of the same process. The first is to be seen at Bamberg Cathedral, the eastern towers of which are beautiful examples of German First Pointed work, greatly resembling those of Laon Cathedral, in France. Now round the first story of the octagonal portion of each of these towers a row of very richly-moulded bases is to be seen, showing that the architect intended to have arcaded this part of his work. This arcade work was evidently cut down, and the cardinal faces of the octagon simply pierced by a plain lancet window. The other example to which I alluded is to be seen in the interesting church of St. Jean du Doigt, in Brittany. When this church was commenced at the end of the fourteenth century or beginning of the fifteenth, it is evident that a much more extensive building was contemplated than that which exists. As far as I can make out, the proposed church would have consisted of a choir and aisles of five bays, and a nave and aisles. When, however, the choir and aisles had been constructed, and the piers of the chancel arch carried up about two-thirds of the way, together with the first bay of the projected nave, the pruning-knife was applied to the design, the proposed nave was abandoned, the bays of the choir were taken off to make a chancel, and the whole building roofed over at one continuous level. The piers of the chancel arch were, however, allowed to remain, although they support nothing. [Against the base of one of these piers is a curious ancient altar.] Now there is one fact noticeable in both of these examples of cheeseparing, and I have no doubt it will be seen in many others. It is that the Mediæval architects, when they had to cut a building down, never attempted to conceal the fact. There could have been no difficulty in cutting away the piers of the chancel arch at St. Jean du Doigt, and a few shillings would suffice to remove the bases at Bamberg,—both buildings would look better for the operation,—but no, the Mediæval builder evidently wished it to be seen that he was going to do a fine thing, but was prevented from carrying out his ideas by circumstances over which he had no control, so he left these fragments to indicate what had been his original intentions.

I shall not trouble you in this paper with any observations upon the materials used in building, or their arrangements for the purposes of accommodation, but I will confine myself to two of what I have described as the artistic difficulties in building: selection of style and appropriateness to the locality and surroundings. Now, I believe that nothing influenced Mediæval architects so greatly as the surroundings and the locality of their buildings. I feel sure that before erecting any building, they studied most scrupulously its fitness and suitability to the surrounding objects. I cannot for a moment believe that the charming way in which Mediæval buildings group together, and form such picturesque combinations with scenery, or with other buildings, are alone the results of a series of lucky accidents. Some people have supposed that the wonderful picturesqueness of ancient towns arises from their irregularity, and the fact of their streets being narrow and winding about, but to prove that this is not the case, I will point to the little town of Sultzfeld, in Bavaria, one of the most picturesque places I have seen. Now, this town is thoroughly rectangular in plan. It has two broad straight streets, meeting in the centre, and cutting it into four exactly equal parts. The very towers of its fortification are set out symmetrically. The Rath-haus is exactly in the middle of the town, with the church close to it. The only deviation from a perfectly rectangular treatment is one caused by the necessity of the site, and that is, the eastern wall of the town towards its north-eastern corner is bent out of the straight line, in order to avoid a large rock which rises at this point. All the lanes in this town are parallel with the walls, and at right angles to one another. The plan is very similar to that of Winchelsea. Now, this serves to show that irregularity of plan was not one of the necessary elements of picturesqueness. I believe that the wonderful beauty and picturesqueness arises from the way in which Mediæval men made their buildings suit to their surroundings, and in criticising or studying ancient buildings this should never be lost sight of. It is very common to hear it said that the proportions of Continental churches, especially those of Germany, are defective because they are far too lofty for their length, and are not sufficiently sub-divided, and I have read in a work upon architecture which enjoys some popularity, a comparison between Salisbury Cathedral and St. Stephen's, Vienna, in which the writer proves to his own satisfaction that Salisbury Cathedral is exquisite in proportion, while St. Stephen's is an ill-proportioned badly-designed building, and from this he goes on to argue that the English Mediæval architects were far greater men than the German. Now, I venture to think that a comparison between the conditions under which the two buildings were erected will prove that each building is admirably suited to its locality and surroundings, and how excellently each architect met the difficulties of the situation. The architect of Salisbury had to erect a church upon a perfectly level site, surrounded by a large disencumbered space, with nothing but trees to enter into competition with the building. He was able to make the church any length, breadth, or height he chose, and from the peculiarity of the situation the whole church could be seen at once. So the architect sub-divided every portion of it, doubled his transepts, and even put narrow aisles to his lady-chapel, because as the building had to be seen alone it was requisite that it should form a perfect picture, containing every element of scale, picturesqueness, and grouping within itself. How different were the conditions under which the Vienna architect laboured. Here there was a very confined space, surrounded by excessively lofty houses, and he saw at once that his only chance of gaining dignity for his building was to treat it as one huge mass, and carry it up a great height, so that at a distance it might tell out well over the surrounding objects, but as the detail could only be seen from very close quarters he trusted to the richness and intricacy of his detail to give size and proportion. I think he succeeded in doing what he attempted. Of course, he could not produce such a beautiful church as the architect of Salisbury, because the drawbacks under which he laboured were very great indeed, and to overcome them at all was a work of the greatest possible difficulty. The huge roof covering the whole church at St. Stephen's would be a defect in a church erected upon an open site, and so would the great unbroken height of the walls; but in the position occupied by that cathedral both are admirably suited to carry out the intention of its architect. It may be objected that I have taken it for granted that St. Stephen's was surrounded by lofty houses at the time it was built, and that there is no proof of this fact, as the present buildings surrounding the church only date from about the seventeenth century; but I can bring forward proofs that the houses erected in German towns during the thirteenth and fourteenth centuries were remarkably lofty. Ratisbon possesses many houses dating from the thirteenth and fourteenth centuries, and they are generally three or four stories in height; not unfrequently they are carried up so as to form great towers, pierced with large windows. Of course this rendered it absolutely necessary to have the cathedral lofty, and thus, although the cathedral of Ratisbon is only about 300 ft. long, it measures nearly 180 ft. to the ridge of the roof. Nuremberg, Landshut, Ingoldstadt, Augsburg, all possess very lofty ancient houses, and the churches are mostly arranged externally under one huge roof, rising often to the height of 150 ft. or 160 ft., and covering both nave and aisles in one vast span. Not unfrequently, as the houses grew in height round the German churches, they heightened the roof or replaced the series of roofs which covered the early churches by one of these enormous single-span roofs. This is the case at St. Leonard's, Frankfort, and St. Lambert's, at Munster. The rafters of the roof of the last-named church were 80 ft. long. Under the notion of "restoration" this vast roof is now being destroyed to be replaced by what is supposed to have been the original series of roofs. This same feeling of a desire to make the church appear above the surrounding houses led our English architects of the fourteenth and fifteenth centuries to add clearstories to the earlier churches; and in the churches of Norwich, Bury, Ipswich, and other places we find something rather resembling the simple arrangement and large treatment of the late churches in Germany. Though, as the English towns were never so crowded as the German during the Middle Ages, the houses were not so lofty; Mediæval town-houses in England are rarely more than two stories high. It is rather a remarkable thing that as the style gets later on the Continent the pitch of the roof gets sharper, whereas in England the pitch of the roof becomes depressed. This seems at first rather to contradict my theory; but I am inclined to think that the process of lowering the roof so frequently seen was generally done in cases where the church did not enter into competition with surrounding buildings. It was also frequently done to give a greater appearance of height to the tower. Necessity may also have had something to do with it, inasmuch as timber must have been much more plentiful in this country during the thirteenth and fourteenth centuries than during the fifteenth and sixteenth. I may just mention the fact, that the village

churches in Germany are in no way remarkable for loftiness; they are, on the contrary, very low buildings, and the abbey churches are as subdivided as the same class of buildings in England.

The same remarks also refer to the town-halls and other public buildings. Excellent examples of the way in which this class of buildings was treated are the rath-hauses of Dettelbach and Volkach, in Bavaria. As a proof that ancient buildings depend greatly upon their surroundings for their beauty, let any one who has not been in Paris for twenty years go there now, and see how terribly the old churches have suffered from the absurd modern fashion of "opening them out." St. Germain l'Auxerrois, St. Merri, St. Medard, St. Leu, and St. Gervais, looked charming when seen piecemeal from the narrow lanes which formerly surrounded them; but now, standing in great open squares, how bald and poor they look! The eye just rests upon those parts of the building which were not intended to be seen; whereas, some little angle or porch, upon which the architect had depended to give character to his work is overwhelmed by the bare walls which form so large a portion of the building.

The heavy horizontal lines which form such strongly-marked features in the west front of Notre Dame in Paris have been very severely criticised; but an exceedingly clever French artist, to whom I was once speaking upon this subject, said,—"You just make a drawing of the front with a number of steep gables and flèches rising against it, and you will soon be convinced that the man who designed the front of Notre Dame was a profound artist."

The practice of architecture in the Middle Ages naturally led men to consider how their buildings would look in execution, and to care very little how their works looked upon paper. Now do not let it be for a moment supposed I say this with the intention of casting blame upon modern architects; but I say without hesitation that we should have very much finer buildings if the client never saw any drawing of the building, and if it were possible for the architect or some assistant in whom he had confidence to watch the building as it went on, and, if necessary, to alter the design without reference to the drawings. Probably one great charm in ancient buildings is that they were not erected from drawings. Of course, the architect made drawings showing the general scheme; but by far the larger portion of the details was directed and explained by the architect, and done under his personal supervision.

I have seen two or three modern buildings which have been carried out in this way.* One is the Church of Holy Angels at Hoar-Cross, of which the architects are Messrs. Bodley & Garner, and I think that anybody who has seen these buildings must regret that this method is not more frequently adopted. I could give innumerable instances of buildings ruined by the client thinking that he understood the geometrical drawings, insisting upon their being altered to suit his views, and then, when it was too late, discovering his mistake; and this leads me to venture a few remarks upon the use and abuse of perspective drawings. Many people have spoken strongly against the use of perspective drawings, and would wish to see them abolished entirely. Of course, they have led to great abuses in some instances, but I cannot help thinking that, as long as clients will insist upon seeing drawings, perspectives are absolutely necessary, as I say without hesitation, that there is not one client in a thousand who understands a geometrical drawing. A great deal has been said with regard to perspective drawings of late. Some gentlemen have suggested that they should only be executed in pen and ink; others that they should be ruled in Indian ink or sepia; and others that they should be coloured in grey tints. Now it seems to me that none of these suggestions deal with the greatest evil which is common in architectural perspectives. The real evil is that so frequently perspective drawings do not represent buildings as they will really appear, and I think this arises chiefly from two causes. In the first place, architects often have perspectives of their buildings taken from points from which they can never possibly be seen; and, in the second place, they frequently ignore the surroundings, and thus we not unfrequently have a building represented as having a grand illimitable open space before it, with stately mansions on either side. Carriages of the nobility and gentry are seen dashing frantically up to its porches, whilst distinguished-looking ladies and gentlemen, reining in their proud steeds, politely bow to each other in the foreground. In one corner the haughty scion of some noble house, with an attenuated umbrella in his neatly-gloved hand, points out to some fashionably-attired fair one the beauties of some angle turret or oriel window; whereas, in point of fact, the building is to be erected in some narrow street surrounded with squalid houses. Perhaps the most distinguished equipage will be a butcher's cart, and instead of these aristocratic ladies and gentlemen, the old apple-woman at the corner and some itinerant pieman may discuss the merits of the design. I cannot help thinking that it is a mistake to have a perspective of this description. If the building is to stand in a narrow street, surrounded by a squalid neighbourhood, why not represent it so? If it is advanced that the building will not look well from an actual point of view, then I say the design is defective, because a building ought to look well from where it will generally be seen. I really believe that a perspective view, taken from some actual point of view, is of great value both to the architect and his client, because it will show the architect at once what are the most conspicuous features in his design, and what features may be dispensed with without injury to the general effect. To the client it will give a fair idea of the absolute appearance which a building will present,—a thing which he will never obtain from looking at the geometrical drawings. Whereas, if the drawing is taken from an imaginary point, it not only deludes the client, but, what is infinitely worse, deceives the architect himself. Of all imaginary perspectives, I think, however, the most dangerous are bird's-eye views, without they are treated in a thoroughly [conventional manner; and I hope I may be pardoned for quoting the words of a certain celebrated claimant for a baronetcy, who distinguished himself at a recent trial. When a drawing was shown him, he was asked, "Do you recognise that house?" He answered, "No, I don't." He was then interrogated, "Would it surprise you to hear that *that* (the drawing) is a bird's-eye view of your uncle's house at Upton?" His answer was, to my mind, a perfect argument against bird's-eye views: "Well, as I never see it from the eye of a bird, I cannot say!"

A gentleman, a friend of mine, was once in competition for a large building in Cambridgeshire, and he determined to send in a large bird's-eye view of his design. I think the answer he got from the committee, though not encouraging, was full of common sense. "The committee cannot understand the perspective sent in, as there is no tower or mountain in the neighbourhood from which such a view could be obtained."

I cannot help thinking that it would be better if architects, instead of having one large perspective of their buildings, would illustrate them, both for purposes of competition and for the benefit of their clients, by a number of small sketches, all showing how the building will actually appear from different points of view; and if I may give an opinion upon the subject, it seems to me that coloured drawings are better for the purpose than either pen-and-ink or sepia sketches, because, surely, an architect has to consider the local colouring of his building and of the materials of which it is composed, and this important portion of the design is entirely overlooked if no colour is to be used in perspectives. I fancy the rage for Indian ink and sepia drawings came in at a time when people thought it chaste and classical to exclude all colour from their buildings. To my mind, nothing is more dreary than a pen-and-ink drawing of a Queen Anne house. The building is not a grand, dignified specimen of architecture depending upon noble proportions and intense refinement of outline, but a cosy, warm, comfortable-looking habitation, depending almost entirely for its pleasant effect upon its red-brick dressings and the combinations of colour caused by the red of its bricks, the white of its sash-bars and the dark purplish grey of its glass windows. Now, how is this to be represented in pen and ink, or sepia? I believe that perspective drawings, showing a building as it will actually appear from certain given points of view, are not only useful, but, as architecture is at present practised, absolutely necessary. If we could return to the Mediæval practice of the architect living on the spot where his work is being carried out, directing it with his own hand, modifying and altering the design as it progresses to suit his own critical judgment, there would be no necessity for perspective drawings; but now, as a rule, a building has to be designed, both as to its general features and even its detail, before a brick is placed upon the ground; and if, as is too often the case, some feature which looked thoroughly well in elevation, looks shocking in perspective, there it must remain, or, if altered, in comes some nice little bill for "extras." Of course, building by contract is a terrible evil, as far as good art is concerned, because you cannot purchase art at so much a foot cube; but might not some of its evils be mitigated by a judicious use of perspective sketches? We shall certainly never have good architecture whilst the client is allowed to see geometrical drawings and to dictate alterations in them.

I now come to a question which has puzzled architects, artists, and critics for the last fifty years, and which is, if anything, further off being settled than ever,—it is the question of selection of style. In ancient times and in the middle ages this difficulty had no existence; so that neither the Mediæval architects, nor, in fact, the architecture of any age, can help us to a solution of this difficulty: very possibly it never will be settled; and the more practical question is not how to settle the point, but how is architecture to get on without its being settled? Well, I think we may, perhaps, find a hint in studying the history of one of the sister arts,—that of music. In ancient times all music was sung in unison, or, possibly in octaves, at any rate every one tried to sing the same note; and if it had been suggested that there was any possibility that an agreeable effect could be produced by a number of people singing different melodies, the person making the suggestion would have been regarded simply as a maniac. However, this has *really* come to pass, and few people would now be willing to give up harmonised music for that in unison. If Dr. Witt, a great German authority, is to be believed, the condition of music during the time which elapsed between the first introduction of harmony and its development into something like a system, must have caused many to think that that art was indeed in a hopeless state. However, in the time of Palestrina, and owing partly, no doubt, to his consummate genius, the art of vocal harmony reached a point of excellence, as near to perfection as that achieved by any art, except perhaps the sculpture of Greece in its most palmy days. Now, why should not some great man, some Palestrina, rise up and harmonise together all our different styles of architecture. "The hour has come," we only wait for the man. But even suppose this never takes place, there is no reason why a number of buildings erected in different styles should look incongruous. On the great canal at Bruges we find buildings of every imaginable date, and yet the very variety of style pleases us, and makes the scene more interesting. Again, how pleasing is the effect of the interiors of many Belgian churches, where we see Gothic windows, screens, and columns in juxtaposition with Renaissance altars, pulpits, and confessionals. What can be more charming than the interior of the great church at Lierre, or of St. Jaques at Antwerp? Whereas, what can be more unsatisfactory than the interior of the great church at Courtrai, which has been denuded of all its rich Renaissance furniture, and completely Gothicised? This seems to prove that difference of style does not cause want of harmony, if the surroundings be only properly considered, whereas uniformity of style alone will never produce it. If you sing in unison you must sing the exact note a quarter of a note too flat, and you obtain discord; whereas if you sing another note altogether you may produce harmony.

It is not because our buildings are erected in a number of different styles that the words "No connexion with next door" might be frequently written over them, but the fact that next door receives no consideration whatever at our hands.

Of course, it is easy enough for the critic to point out these evils, but very difficult indeed to suggest a remedy, or even a palliative. As, however, I am not a member of your profession, I may unhesitatingly say this: I am sure that if architecture is ever again to hold that high place amongst the arts which it did in olden times, it will be the work of architects. Your Palestrina will be amongst your own body, he will not be an "intelligent builder" or an honest bricklayer, or even a review writer. I think no more ridiculous suggestion ever emanated from

* Described and illustrated in *Builder*, pp. 13, 14, and 15, *ante*.

the brain of a madman than the absurd proposal that architecture should be reformed by building without the architect, and leaving the design to be made by the intelligent builder or the honest bricklayer; and to those literary gentlemen who have expounded this wonderful theory, I would simply say, "Very well: literature at the present day is in a decidedly unhealthy condition, therefore let us abolish the author and the editor, and leave our books and periodicals to be written by the intelligent compositor and the honest printer!"

I have said that it is not a mark of the intelligent builder to make a sacrifice for the sake of art, but I say, unhesitatingly, that this is frequently done by architects. It is a well-known fact that many men in the architectural profession throw up lucrative work rather than perpetrate what they consider a sin against art.

The fact is, we want, if possible, a great deal more of the architect. If it could be managed that the architect could visit his buildings more frequently, that there should be more personal supervision and less mere office-work, our architecture would greatly benefit by it. If a greater number of buildings could be erected without contract, by measure and value; if there could be more personal direction, more sketching and less geometrical drawing, more artistic work and less mechanical reproduction, things would soon improve.

If, however, our architecture is to be left to the mechanic, it is easy to see what will happen. By degrees it will have less and less art in it; it will rapidly become more and more vulgar in its pretentiousness, and more and more uninteresting in its monotony, till at last we shall come to realise the triumph of dulness so ably described by the poet,—

> "As one by one at dread Medea's strain,
> The sickening stars fade off the ethereal plain;
> As Argus eyes by Hermes' wand oppress'd,
> Closed one by one to everlasting rest;
> Thus at her felt approach and secret might
> Art after art goes out, and all is night."

THE REVISED RULES OF THE INSTITUTE.

MEETINGS for the consideration of the revision of the bye-laws of the Royal Institute of British Architects, proposed by the Improvement Committee, have been held during the first three days of this week. The meetings are officially private, and we have always made it a rule to respect the wishes of the Council in regard to such meetings as they declare to be private, and we therefore abstain from report of or comment on the proceedings in detail. We may, however, state that the first of these meetings, on Monday night (when the president, Mr. Charles Barry, occupied the chair), was very well attended, not only by many influential members of the profession in Town, but also by a considerable number of country members, some of whom had come from some distance to take part in the proceedings.

We may just remind our readers that the committee upon whose report the proposed revision of bye-laws is based was constituted in order to consider and report upon resolutions passed at a special general meeting on February 7th, 1876, which meeting discussed the propositions of a previous committee, and ended by referring the whole subject to the Council for reconsideration. The Council called in the aid of several past vice-presidents, and, in combination with them, constituted a "Committee for the Improvement of the Institute," with Mr. Whichcord, a vice-president of the Institute, as its permanent chairman.

We shall not be travelling out of our record if we observe that the general tendency of the proposed new bye-laws is to render the Institute of Architects less metropolitan and more national; to render its professional status of ability and education higher and more definite; to adopt a system in regard to the election of council and officers which will almost ensure that the ablest and fittest men shall be retained longest in office, and shall pass by a natural gradation to the highest offices; to render the library more largely available for study; and ultimately to improve the premises, with the view to greater present comfort and future increase of members and attendance.

We may also add, in regard to the first-named point, the rendering of the Institute less metropolitan, that we believe the propositions of the committee in this respect will meet the approval all members, whether in town or country, when their object and principle are properly understood. We make this remark for the benefit of country members who were not at any of the meetings this week, as we think, from the remarks of some who were, that there has been a misunderstanding among those who have received the Institute circular as to the real intention and spirit of the new propositions in regard to this point: an idea that the interests of country members were to be neglected. The object really is, we believe, to do away altogether with the expression "country member," and the distinction which it implies; to recognise all able architects all over the country as of equal importance to the Institute and equally entitled to its privileges and responsibilities. We cannot but think that this is a step in the right direction, and feel sure that if those members residing out of London who may have felt some doubt as to the spirit and working of the proposed changes in regard to themselves, had heard the explanations given at the meeting of Monday evening, they would have felt their objections to be quite removed or answered.

As our readers are aware, we have, unfortunately, not been able always to adopt the views of the managers of the Institute; on the contrary, we have felt bound to express in plain terms an adverse opinion of its recent policy in some matters. When, therefore, we say that, having gone carefully through the proposed bye-laws, we are entirely in sympathy with them in the main, and approve thoroughly of the general spirit which pervades them, and believe that their adoption as a future basis of operations ought to prove really beneficial to the working of the Institute, our opinion may be taken for something more than the mere friendly expression of partisans. There are one or two points that are capable of improvement; one suggestion was rescinded by a vote of a majority at the meeting of Monday; but in the main the programme is admirably drawn up, and has obviously been the result of a great deal of serious thought and deliberation on the part of a committee which, as its president assured the meeting (and we accept his statement fully) "has had no one thought but for the good of the Institute." When the deliberations are at an end, and the result officially public, we may take an opportunity of drawing attention to the changes in detail, and so bring them under the notice of those who are not yet members, and who, when they recognise how much conscientious effort has been expended in making the central representative body of the Profession more fitted to be central and to be representative, will, we hope, see the propriety of giving their own cordial adhesion to an Institution which, if the new programme is adopted, will then be really constituted on the principle that "union is strength."

There was one incident of the meeting, on the 12th, however, which, so far from being private, is meant to be as public as possible. This was the reading of a letter from the Prince of Wales to the President, in which his Royal Highness, as President of the English Committee of the Art Section for the Paris Exhibition next year, exhorted the architects of this country to make an effort towards an adequate representation of English architecture in the Exhibition. Professor Donaldson, commenting upon the letter, observed that on the occasion of a previous great international Exhibition at Paris he had felt much disappointed to find how poorly English architectural talent was represented; and he hoped that the profession in this country would do their best to make a worthy display in the eyes of Europe. While supporting the learned Professor in this exhortation, we cannot help adding an expression of pleasure at finding him, after so many years of active life, still displaying the same warm and practical interest in the welfare of the Institute as when he took a leading part in the inauguration of its career.

Holy Trinity Church, Dartford, Kent.—Plans for the restoration and alteration of this edifice have been prepared by Mr. A. W. Blomfield, M.A., and the tender of Mr. J. G. Naylar, of Rochester, amounting to 2,424*l.*, has been accepted for carrying out the works, consisting of new roof to nave and south aisle; also rebuilding south aisle and new floors and seatings throughout. The works are to be commenced early in May, and finished in four months. The restoration of the north aisle will not at present be proceeded with, for want of funds.

PREMIATED BUILDINGS OF THE NEW "BOULEVARD CENTRALE" IN BRUSSELS.

THE question has been asked whether there exists, or whether there ever has existed, a Flemish Renaissance. This question can hardly be unconditionally answered, either in the affirmative or negative. In comparing specimens of German, French, Italian, and Belgian architecture, we perceive an unmistakable common character. Italy, the high school of the arts, and the cradle of the Renaissance, gave birth also at the same time to great changes in architecture and in the plastic arts. The principle of the antique, first again applied in Italy in Christian art, gave to architecture a new impulse, new life, and new, unanticipated beauties, many of which it owed to the technique of sculpture and painting. From this originated the common features mentioned. Certain buildings, for instance, at Nürnberg, remind us very forcibly of the architecture of the Grande Place of Brussels. In France, also, similar traits may be found everywhere. Of course, there are deviations; but those variations have hardly modified the style of the Renaissance, and they may all, with a few exceptions, be explained by the difference of the national character, by climatic conditions, and local customs and manners.

We should, notwithstanding, go too far if we were to accuse the Brussels Board of Works of an anachronism, because, six years ago, when it caused the river Senne, flowing through the lower part of the town, and spreading disease by its exhalations amongst the inhabitants, to be vaulted over (a gigantic undertaking, by the bye, costing millions of francs), and thus gained the site for the beautiful "Boulevard Centrale," with its branches, which connects the station of the railway *du Nord* with that of the railway *du Sud*, it offered a number of premiums for the most tasteful and successful façades in the style of the Flemish Renaissance. The first premium amounted to 800*l.*

The result obtained justifies the programme of the competition in question. If we take a walk along the forest of houses which have sprung out of the ground as if by magic, where palatial buildings, adorned with sculpture, attract the eye, it must be confessed that, Paris excepted, hardly any other Continental capital offers anything similar. Most of the buildings are erected partly of the yellowish-white French sandstone, which hardens on exposure to the air, partly of Belgian granite. The harmony of style attained, notwithstanding all variations, is surprising. The architects of Brussels have given a proof of their ability; some of them have even displayed power of invention. The buildings remind us of the shrewd saying of the late German art-critic Schnase, who affirmed that architecture has a Janus-like face; it is never entirely the present, but, on the contrary, future and past at the same time.

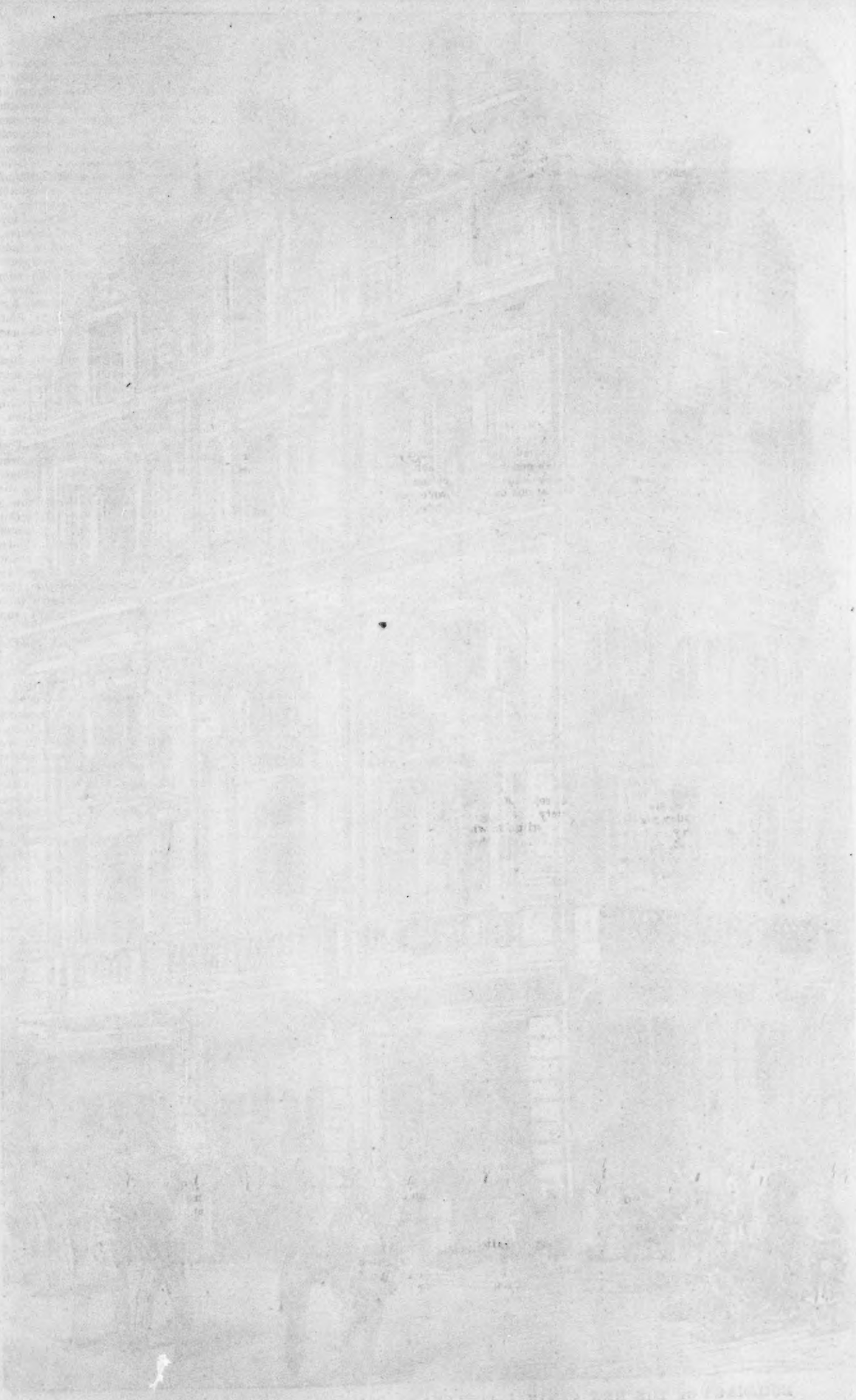
The engraving we give represents the Café de la Bourse, opposite the Exchange, and which received the second prize in the competition. On another occasion we will illustrate the "Banque de Belgique," to which the first prize was awarded.

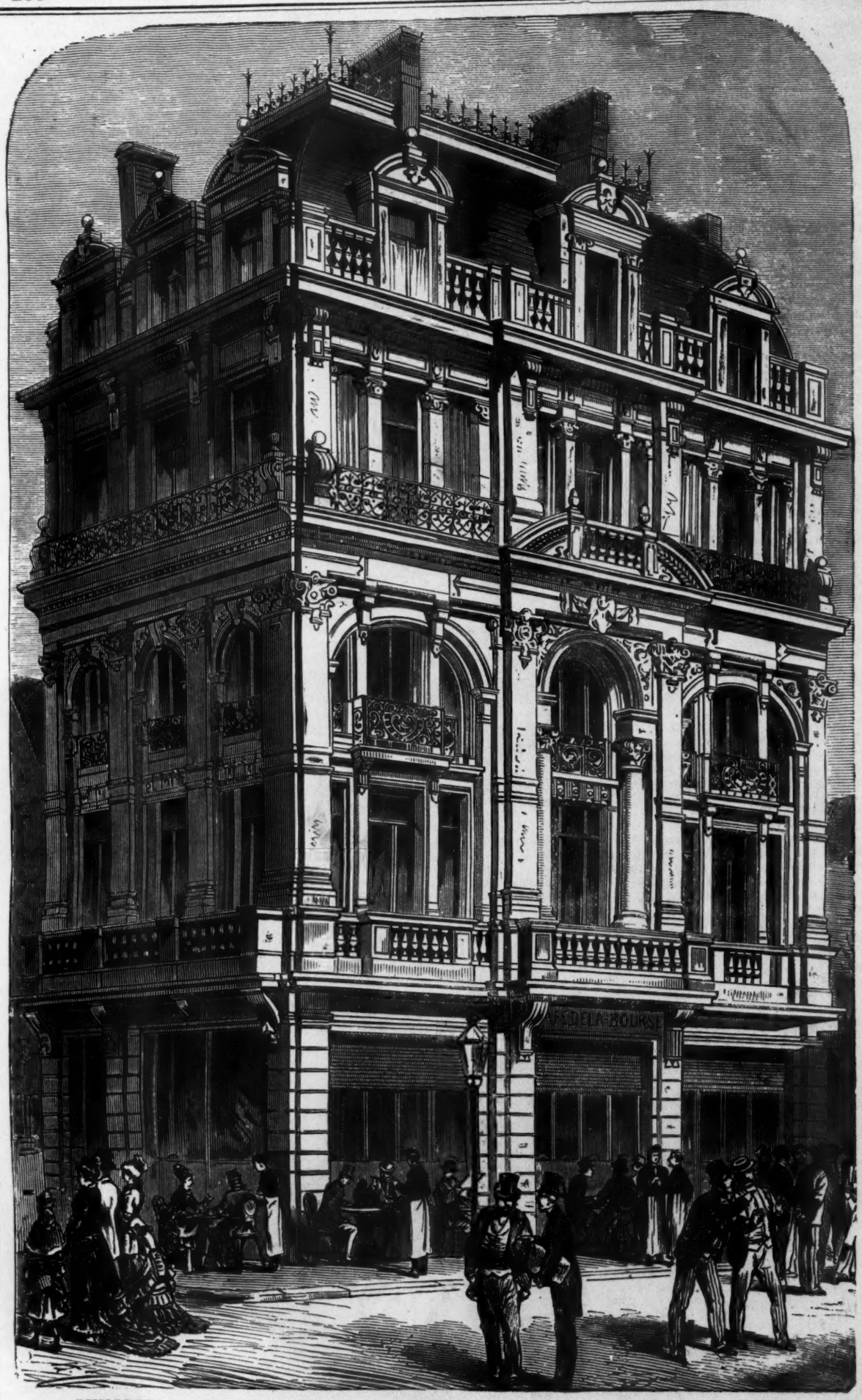
MEASURED LANGUAGE.

IN a recent publication, Mr. Ruskin says,—"Your present system of education is to get a rascal of an architect to order a rascal of a clerk of the works to order a parcel of rascally bricklayers to build you a bestially stupid building in the middle of the town, poisoned with gas, and with an iron floor which will drop you all through it some frosty evening; wherein you will bring a puppet of a Cockney lecturer in a dress-coat and a white tie, to tell you smugly there is no God, and how many messes he can make of a lump of sugar. Much the better you are for all that when you get home again—aren't you?"

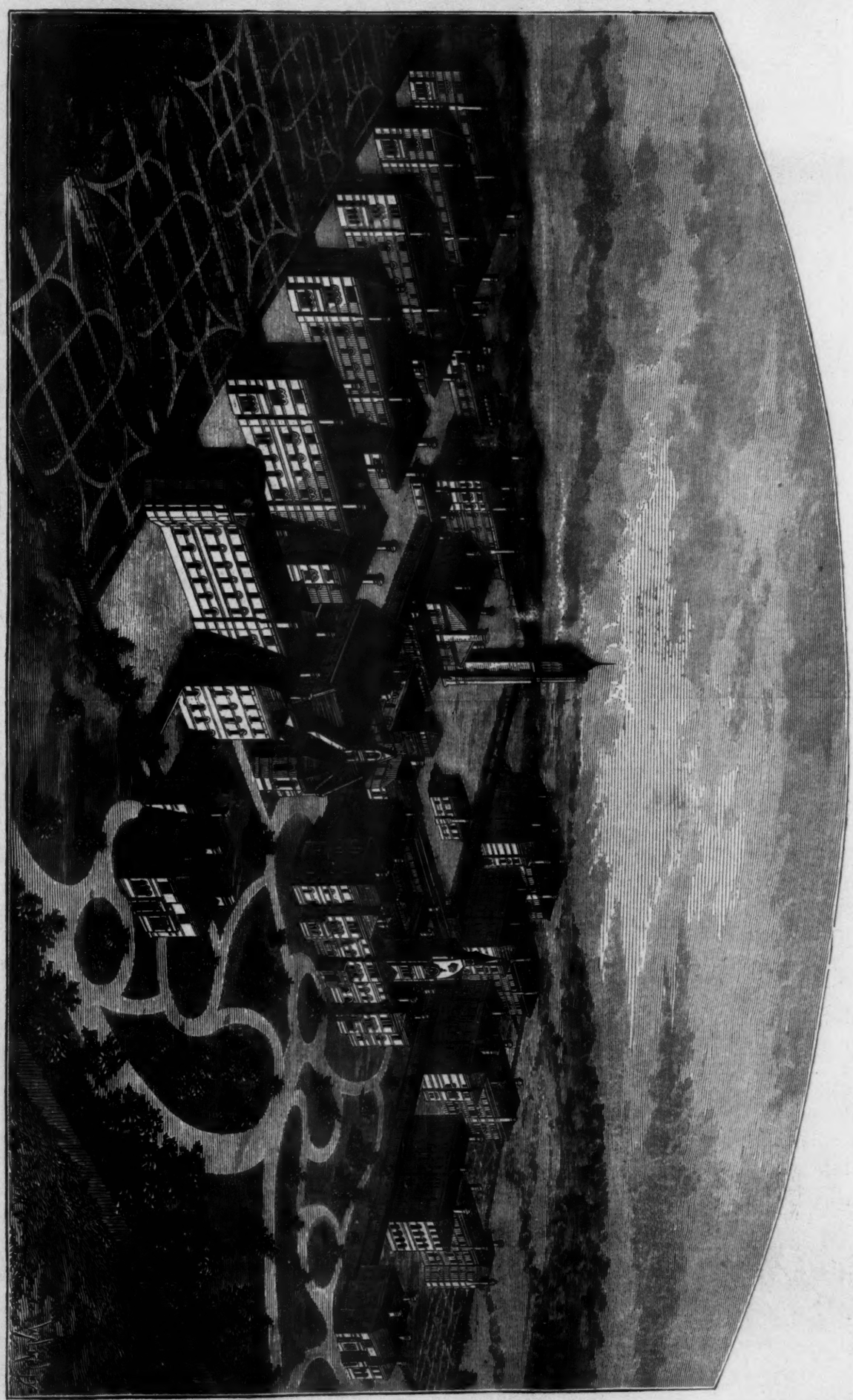
A correspondent, signing himself "R. A.," wishes to know whether he is "to infer from this, as Mr. Ruskin is understood to be a respectable man, that all architects, clerks of works, and bricklayers are rascals?"

School of Art, Manchester.—A plot of land has been purchased in Manchester for the erection of a new School of Art in that city. Upwards of 13,000*l.* has been subscribed, the list of subscriptions being headed by Lord Derby with 500*l.*

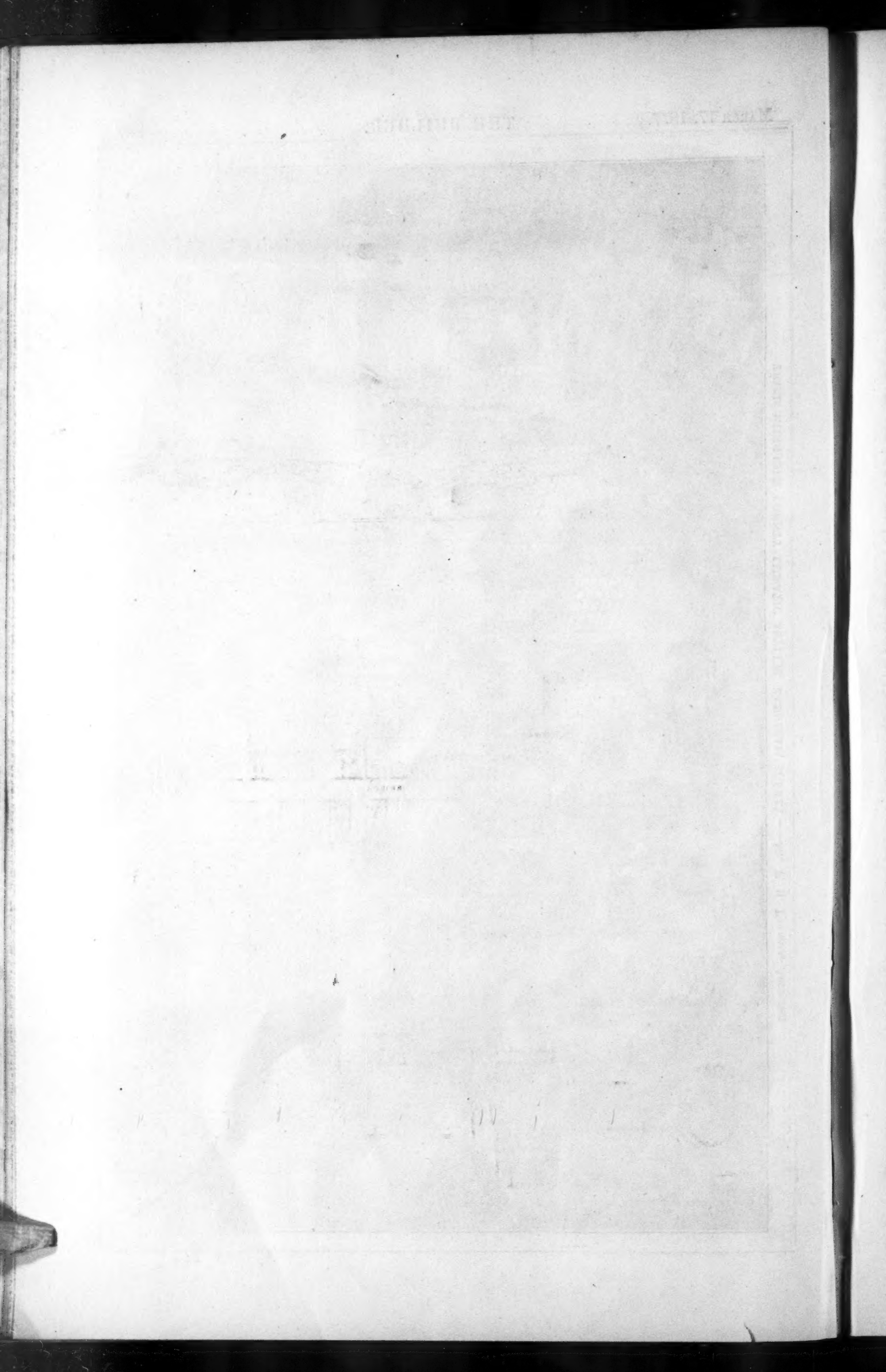


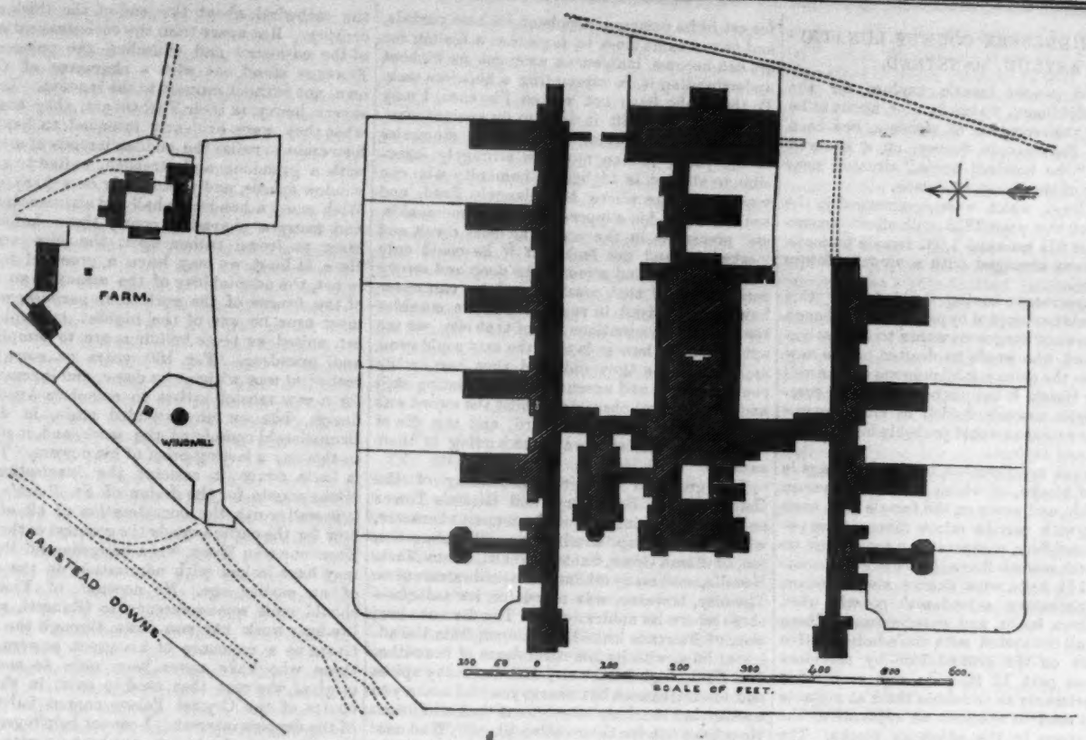


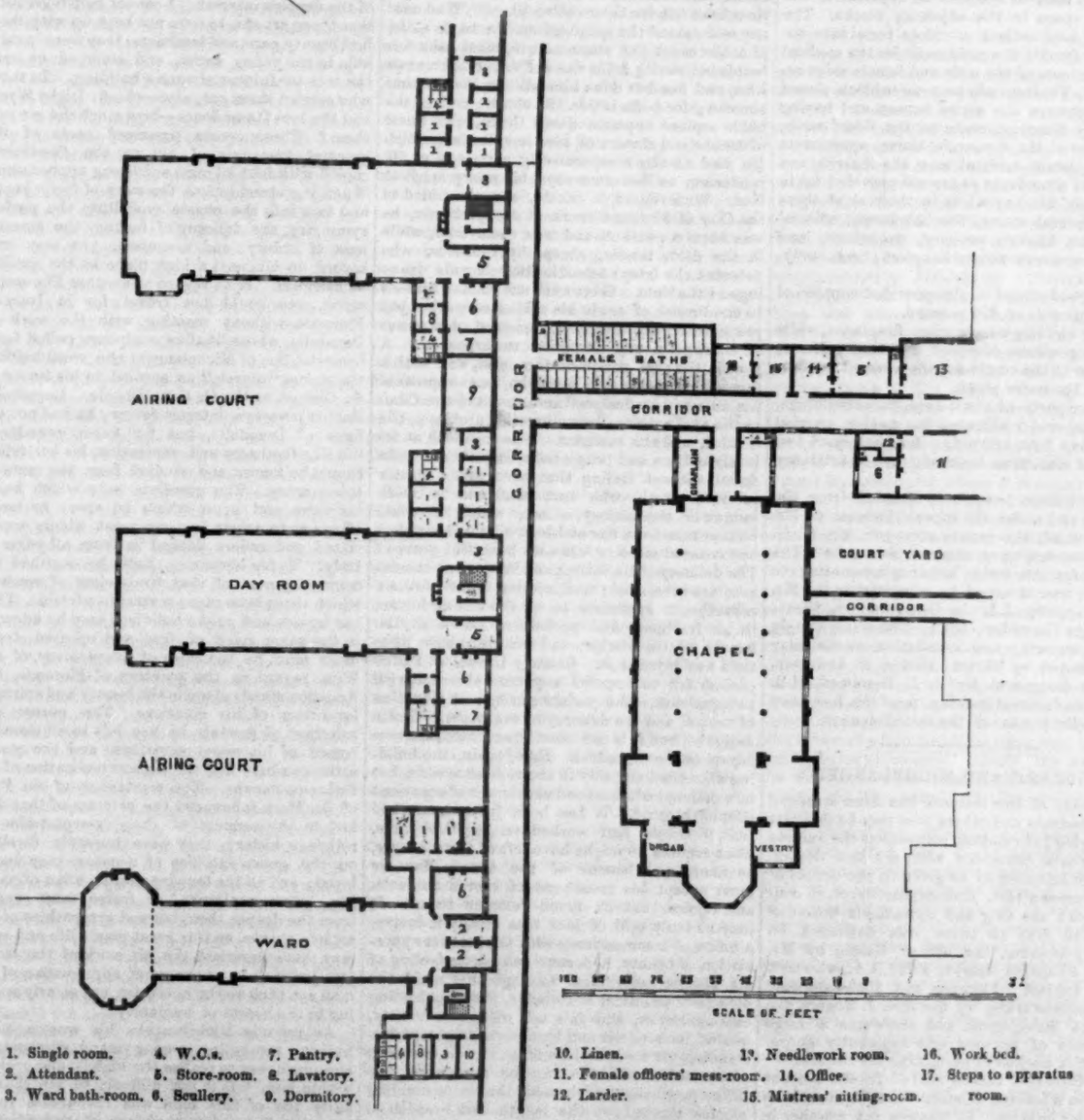
BUILDINGS OF THE NEW CENTRAL BOULEVARD, BRUSSELS: THE CAFÉ DE LA BOURSE.



THIRD MIDDLESEX COUNTY LUNATIC ASYLUM, BANSTEAD, SURREY.—MR. F. H. POWNALL, ARCHITECT.







1. Single room.
2. Attendant.
3. Ward bath-room.
4. W.C.s.
5. Store-room.
6. Scullery.
7. Pantry.
8. Lavatory.
9. Dormitory.
10. Linen.
11. Female officers' mess-room.
12. Larder.
13. Needlework room.
14. Office.
15. Mistress' sitting-room.
16. Work bed.
17. Steps to apparatus room.

THIRD MIDDLESEX COUNTY LUNATIC ASYLUM, BANSTEAD.—*Block Plan, and enlarged Plan of a Portion.*

THIRD MIDDLESEX COUNTY LUNATIC ASYLUM, BANSTEAD.

THE third pauper lunatic asylum for the county of Middlesex, which is now about to be opened for the reception of patients, has been erected at Banstead, in Surrey, on a site well known as "the hundred acres," situated near the summit of the Banstead-downs.

The buildings, which were commenced in the early part of the year 1873, will afford accommodation for 615 male and 1,081 female patients, and have been arranged with a view to future enlargement.

The magistrates having decided that this asylum should be occupied by patients who, though incurable, are not dangerous either to themselves or others, and who would be drafted to the new asylum from the older establishments at Hanwell and Colney Hatch, it has not been thought necessary to provide accommodation in single rooms to the same extent as would probably be required in an ordinary asylum.

The general arrangement of the buildings is in detached blocks, of which there are four on the male side, and seven on the female side, each containing, with certain minor divergencies:—On the ground-floor, a general day-room; and on the first and second floors (associated) dormitories for 144 beds, with twenty single rooms, and the necessary attendants' rooms, ward kitchen, stores, baths, and water-closets. These blocks are all connected with the administrative departments on the ground-floor by corridors for the most part 12 ft. wide, and so divided into compartments as to enable them at suitable times to be used in sections as adjuncts to the day-room space in the adjoining blocks. The two main longitudinal corridors terminate towards the front in the residences for the medical superintendents of the male and female sides respectively. The front administrative block, placed midway between the above houses, and having a westerly frontage, contains the Board-room, waiting-room, the steward's house, apartments for the assistant medical men, the matron, and such of the attendants as are not provided for in the patients' blocks; while in the rear of these are the general stores, the bakehouse, officers' mess-rooms, kitchen, scullery, workshops, and baths; a common recreation-room; and, lastly, the laundry.

A detached chapel is also provided capable of seating upwards of 850 persons.

All the buildings have open fireplaces, while all those portions occupied by the patients, together with the corridors, are warmed in addition with hot-water pipes.

On other parts of the estate, farm buildings, gas works, and residences for twelve married officers have been erected. A cemetery of two acres has also been inclosed, and a mortuary built.

The buildings have been erected from the drawings and under the superintendence of Mr. F. H. Pownall, the county surveyor, Mr. W. H. Culverhouse acting as clerk of the works. The contract for the main building amounting to 158,000*l.*, was obtained in competition by Mr. J. T. Chappell, of Little George-street, Westminster, in December, 1872. The water supply and the warming and ventilation works have been executed by Messrs. Easton & Anderson, from the designs of Mr. F. J. Bramwell, C.E. Mr. Stevens's bread-making machine has been fitted up for the use of the establishment.

FLORENCE AND MICHELANGELO.

A COURSE of free lectures has been arranged for art students and others who may be desirous of receiving information concerning the various employments connected with art and design, which are intended to be given in the School of Art, Primrose-street, Bishopsgate-street, in connexion with the City and Spitalfields School of Art. The first of these was delivered on Thursday evening, the 8th of March, by Mr. Thomas Chatfeild Clarke, F.R.I.B.A., who took for his subject "Florence and Michelangelo." The chair was taken by the Rev. J. Rogers, the rector of Bishopsgate, and there was a large attendance of persons who apparently appreciated this method of promoting art culture.

Mr. Chatfeild Clarke said:—To the student of art in whatever branch, Florence must have a peculiar interest. It matters not whether in the field of painting, sculpture, architecture, or ironwork, she had a succession of men who have left their impress upon all time. To attempt any description of a city instinct with a genius for art in its common people at its best periods, and at the same time to hope that a feeling for art can become indigenous amongst us without understanding it, is attempting a hopeless task. To those who have not visited Florence, I may say how little spoilt it is as to its ancient associations, and how living it is now in memories of the past. A man must be strangely insensible to all that is highest in humanity who can visit the house where Michelangelo lived, and see his stick, his slippers, and other mementos, still preserved in the rooms he once dwelt and worked in, and not feel that if he could only draw into his mind some of the deep and strong conceptions of that master-mind, he can never have wholly lived in vain. When we consider the rude and contentious life of that city, we are apt to wonder how it is that the arts could grow and flourish as they did, and that her artists could conceive and execute works of lasting skill and monumental character, whilst the sword was scarcely ever in the scabbard, and the din of conflict was almost always resounding in their ears.

The group of buildings consisting of the Cathedral, the Baptistery, and Giotto's Tower each possess an interest of the deepest character, whilst they group admirably. The churches, too, of Santa Croce, Santa Lorenzo, Santa Maria Novella, and many others, were noble structures. The city, however, was noted for its palaces—those where its nobles dwelt. The distant view, also, of Florence looked down upon from the adjacent hills, with its beautiful dome of the cathedral rising high in the air, with its many spires and towers, cannot but charm you and make you understand the deep attachment that all Florentines have felt for their native place. Who cannot understand the longing that Dante, in exile, of noble heart yet stern nature, must have felt for his native city? He was of Florence's greatest sons, and she has done him all the honour that she can; for both inside the church and in the noble square opposite Santa Croce, the finest of tombs and statues of him have been erected. He died at the comparatively early age of 56, rendering, as Boccaccio says, his weary spirit to God. With regard to Giotto, one who added to the City of Florence much of its loveliness, he was born a peasant, and was discovered, while in the fields tending sheep, by Cimabue, who detected the latent talent in Giotto's rude drawings at the time. Giotto did not confine himself to one branch of art in his earlier education, but prepared for all, and was possessed of a power of conception and execution unsurpassed. A poet in the real sense of the term, and with a fame lasting through ages, he was approaching 60 when he designed and executed the Campanile at Florence, becoming the architect, the builder, and the sculptor. Who can look at its lovely outline and proportions, and its exquisite detail, without feeling that here was a master in very truth who had designed a work unique in the history of art, which we could neither take from nor add to, whilst it is enriched and covered more or less with beautiful groups? The delicacy of its outline and its perfect chasteness are preserved; and, coming to us after six centuries, it expresses to us the feeling for art in its freshness and perfection. Look at the beauty of its marble, and consider how little time has injured it. Giotto's Chapel at Padua cannot fail to impress any true observer with two qualities,—the perfect purity and elevation of design, and the delicacy of execution. Giotto designed, but it is not clear he executed, the new façade of the cathedral. Here, again, the building abounded not only in the richest marble, but in a delicacy of detail and chasteness of ornament peculiarly good. It has been justly remarked that, if Giotto had worked on social pictures, what records he might have left of the manners, customs, and lessons of the time! But we must accept his treatment of sacred subjects, and rejoice that so much remains to us. It may be truly said of him that steady industry, a union of common sense with the highest appreciation of beauty, a devout and poetic feeling of art, always nobly ideal and spiritual amid the defects of practical knowledge, were his leading characteristics, and this not without a homely, quaint, incisive wit and humorous insight, understanding his time, and content to dwell in it with moderation, spite the warlike tendencies, the bitter jealousies and hatreds that were dividing parties throughout the length and breadth of Italy. One thing is clear, that he, like other great men, maintained the dignity of a true artist.

To Arnolfo belongs the honour of designing the cathedral, about the end of the thirteenth century. But apart from the ecclesiastical work of the cathedral and churches, the palaces of Florence stand out with a character of their own, not without interest to the student. Lofty, severe, heavy in their Tuscan art, they convey what they were evidently intended to be, half fortresses to resist the sudden inroads of attack, with a grandeur and strength, united to small window spaces, and that mostly on a high level. With many a handsome hall and staircase inside, and many a charming court, these buildings seem to frown rather upon the city street. Here, at least, we may learn a practical lesson in art, the adaptability of the means to an end, of the fitness of the work to its purpose, which must ever be one of the highest triumphs of art, united as these buildings are to simplicity and grandeur. For 100 years or more the cathedral was without its dome, and it remained for a new race of artists to complete Arnolfo's design, but on an extended scale, in 1420. Brunelleschi completed the work, and it stands to this day a lasting proof of his powers. There is little doubt it assisted the inspiration of Michelangelo for the design of St. Peter's, and it is well worth the consideration of all of you how far the outline excels the greatest cathedral. Even our own Wren, when designing St. Paul's, may have looked with admiration on the work of an earlier age. No account of Florence should omit some reference to Ghiberti, whose life-long work has run down through the Continent as a memento of his great powers. To those who have never been able to see the original, the cast that used to exist in the art courts of the Crystal Palace cannot fail to be of the deepest interest. I cannot help regretting that those art courts were not kept up with their first beauty, care, and freshness; they were invaluable to the young artist, and stamped at once the true usefulness of such a building. To those who carried them out, also—chiefly Digby Wyatt and the late Owen Jones—how much did we owe them? These courts possessed casts of the greatest treasures of art on the Continent, copied with faithful care and living appreciation. When you stand before the work of forty years, and look into the chaste modelling, the perfect symmetry, the delicacy of feeling, the correctness of beauty and execution, you may well accord to Ghiberti a high place in the art-life of Florence. With regard to another Florentine artist, one could not travel far in Italy or Florence without meeting with the work of Donatello, whose life-like sculpture called forth from the lips of Michelangelo the word bidding the statue "march," as applied to his image of St. George, at the Or San Michele. Luca della Robbia possesses interest for us; he had not the force of Donatello, but for finish, roundness, life-like freshness and expression, his *bas-reliefs* should be known and studied from the casts in this country. The porcelain ware which bears his name, and upon which he spent so many efforts as to colour, became most widely appreciated, and orders flocked in from all parts of Italy. To his ideas may justly be ascribed the commencement of that lively class of work of which there is no mean revival in our time. That our houses and public buildings may be adorned in the same spirit of free and spirited treatment must be the wish of every lover of art. With regard to the painters of Florence, Fra Angelico stands alone in the beauty and spiritual loveliness of his creations. The purest and saintliest of mortals, he has left to all time the record of his angel creations, and the young artist can here find the highest realisation of the divine on canvas. The martyrdom of the Prior of St. Mark influenced the painters of that day, and in the sadness of their interpretation of religious history, they were inwardly dwelling on the great sacrifice of a nature they deeply loved; and as the true inspiration alike of painting, poem, sculpture, or fresco must spring from the deeper thoughts and sympathies of the artist's nature, so this great man's life and work may have enriched the art work of the world and justified to us our great appreciation of the man set back to the centuries, but clearly speaking to the hearts of humanity.

As regards Michelangelo, his was a noble nature, struggling among many discouraging circumstances to realise the highest and greatest within him. It is not difficult to see that the early life of this man was favourable to his culture. Taken into the house of the Medici, the constant friend of a man of culture, and surrounded by the valuable treasures of art and antiquity, such a mind grew quickly, and as

Florence then possessed, under Lorenzo, a school of art directed by his personal choice and will, all seemed to favour the starting point of the life of the young sculptor. This, however, was not to last long. Troubles soon arose, and Lorenzo's death left him without a home. The chequered life of the time no doubt accounts for his somewhat unsettled career in his earlier years, and it is not until his execution of the group "The Mourning Mary with her Dead Son in her Lap," that we find his name recognised as in the first rank of sculptors. In the "David" which followed, Florence and the world of art recognised the man truly, and it was such an occurrence as gave rise in the minds of the people to the habit of reckoning from the date of its erection, so greatly did it move a city rich in art and artists. It is now removed to the Academy of Art, to prevent the effects of weather in farther injuring it. It impresses us with a manly strength and freshness, a joyful rendering of a pure human form, and cannot fail to infuse its spirit into the beholder, as every work of true genius should do. In 1505 Pope Julius II. summons Michelangelo to Rome to put him to work on a mausoleum or sepulchre which was to outvie every work of the kind ever before attempted. The design is prepared, and the Pope asks the price. "100,000 crowns," is the reply. "Let us double and proceed," says the Pope. The work was taken the greatest interest in, and the "Moses" is the first proof of the grandeur of the work. Difficulties, however, arose as to payment, and meeting with no response, Michelangelo leaves Rome in high dudgeon. Messengers are sent after him and threats used, and after a deal of delay he returns. The Pope orders an equestrian statue of himself, which Michelangelo, after several mishaps, produces successfully in bronze, thereby further establishing his claim to that universality in art which is at once our surprise, and certainly beyond all precedent in our modern days. He is afterwards commissioned to paint the ceiling of the chapel of Sixtus IV. Almost every one knows the fatiguing position in which he had to paint this ceiling, almost unaided. Its leading characteristics are known to all; its power of conception only equalled by its power of execution, and the originality of much of its treatment in a style at once new, make it certainly one of the artistic wonders of the world. Upon the accession of Leo X. to the papal chair, he was commissioned to design a façade of San Lorenzo, and here we have him entering on a new career as an architect, which he would carry out alone or not at all, starting off to Carrara to select the marble in 1517. But after much outlay and time spent, and much sickening disappointment, nothing was effected. After the death of Raffaelle in 1520, Michelangelo remained indisputably the master in his profession. Now soon was to follow the masterpiece in sculpture that Michelangelo ever conceived, the chapel with the tombs of Lorenzo and Giuliano, which was added to the church. The capitulation of Florence in 1530 found him free to commence in sculpture what must be admitted to be the greatest work of his life,—the four figures at the feet of the tombs of the Medici: Day, Night, Dawn, and Twilight. It is said that he worked at these figures with morbid haste, and that he actually killed himself with work. The place that Michelangelo had now won in the field of sculpture placed him in juxtaposition with the highest in any age, and of course comparisons were made with Greek art; but there was not any real ground of comparison between them. From letters of the time we know how he was now suffering; no longer in middle life, suffering in his head and in his mind, determined to work through sorrow and sickness. As to his fresco painting, "The Last Judgment" it was a work pressed upon him by Pope Paul III. This work, colossal in its character, full of life and powerful but painful imagination, occupied, it is said, from six to seven years of his life, and now remains, blackened and somewhat injured, as a marvellous result of his powers. His last work was "Christ lying Dead on His Mother's Lap, and Joseph of Arimathea by her Side," and often would he get up in the middle of the night, if he could not sleep, to work at this last task. Time speeds on, and then the master feels the end approaching, and welcomes it thus:—

> "For this I know, the greatest bliss on high
> Belongs to him called earliest to die."

The sketch of "this perfect prodigy of nature,"—this sculptor, painter, architect, poet, and engineer,—must surely make one thing plain to us, that he was a man of full round nature and of broad development. Why cannot we have such now among our artists, architects, sculptors, &c.? Why are we for ever to lament the little sphere each artist now selects? Why are we to feel the title of great so seldom true to more than a special faculty in and around us? Where shall we seek for the greatness that can design and execute, unaided and alone, the most different classes of design? In the grandeur of this man's solitary, earnest life we find the germs of true greatness. In the environment of the lives of those who would be great to-day must we seek for much of their failure; but the consideration of this subject will not be useless if it brings us to consider the unreality of that art which is mainly representative and not imaginative, and which rests, not on the instructions of a spiritual or fresh insight, but on the mannerisms of the models of a past age.

SOCIETY OF BRITISH ARTISTS.

THE fifty-fourth annual exhibition of this Society is now open; the degree of improvement in the quality of the works exhibited, which we had noted during the last year or two, seems to be kept up, and is perhaps carried further this year. At all events, there are some very good works; partly, however, by contributors whom we have chiefly known hitherto in other quarters. Among these are several works of high merit by Mr. J. W. B. Knight, of which we may especially mention "A Lowering Sky at Eve—Bournemouth" (322), which is a work quite out of the common way in tone and treatment, and the small painting in the same room, "Harvesting Oats" (270). Mr. Wyllie, whom we have chiefly known for landscapes, nearly always admirable and full of artistic feeling, sends this year a figure-subject of some importance, an interior of a public-house, the "Good Intent," in a seafaring town (77). This is a large bare room, surrounded by groups of sailors and their friends, in various phases of good fellowship and conviviality; the execution seems at first glance somewhat blurred, but an examination more in detail shows that all the figures are sufficiently made out, and with much variety of character and truthfulness and ease of attitude and manner; notice particularly the sailor coming up to speak to the group of damsels on the right, and the man whose profile is seen relieved against the window on nearly the extreme left. This is a very clever work, and the author of it contributes also proofs that his cunning in handling landscape is not abated by his diversion to figure subjects. Mr. G. A. Storey sends a very pleasing study of a ladylike gentle-looking girl, "Patience" (313), seated on a stile, with a half-opened book before her; and Mr. Calderon a sketch of a girl under the title "Sybil" (65).

Mr. Ludovico's scene in the home of a puppet showman (47) is worth note, because in the expression of the girl's face, and the execution of the figure, we find something better than that mere book-illustration type of treatment which is all that this artist has usually achieved,—something more of tone and feeling. Mr. Woolmer's little work, "Imogen Sleeping" (64), is worth attention; it is a very clever and complete little painting in an original style. Mr. Haynes King's "Course of true Love never did run Smooth" (86) runs too smooth; it is simply well painted, but without character. There is humour and clever execution in Mr. Gadsby's painting of a little girl desperately busy over rolling paste for "Apple Pudding" (121); there is plenty of piggishness in Mr. Holmes's pigs in "A Scramble" (107); and intense cattishness in Mr. Coulder's cats enjoying "Luncheon for Two" (140); Mr. C. Cattermole's painting of two cavalier duellists "Disarmed" (142) by a girl who rushes between them, and clasps one by the wrist, while the other lowers his weapon, and bows in acknowledgment of her presence, is an admirable work, in tone, grouping, drawing, and expression of the figures. We should be disposed to call it the best painting in the rooms, and it would hold a high place anywhere. Mr. A. B. Donaldson's ambitious painting of "The Budding Staff brought to Tannhäuser" (198), disappoints us, as most of his figure subjects do, in spite of fine colour and excellent drawing: there is something unreal about it. This applies less to his picture of children taking "A Holiday in Kensington Gardens," which is natural and pleasing; and he sends, as usual, some small landscapes, full of power and poetry. Among other figure subjects we can only notice Glindoni's "An Admirer of Art" (213), Mr. Gibbs's study of "A Mulatto," a fine piece of colour (or tone) as well as drawing (274); Mr. Bridgman's clever, but odd, "Souvenir of Italy" (361); and Mr. Lucas's capital figure of a buff-jerkined soldier "On Guard" (364). Mr. J. D. Watson sends a rather large painting, called "A Christmas Greeting" (391), which we are rather sorry to see with his name to it. He really should not.

Among landscapes, Mr. A. F. Grace's "Harvest Moon" (32), and "A Breezy Day in June" (294), have more than ordinary merit and feeling. Two highly-finished landscapes by Mr. H. W. B. Davis please us very much in tone, but are fearfully hard. Mr. J. Peel's "Pont-y-Pant and the Lledr Valley" (377), is a fine landscape, remarkably solid and yet aërial in the hills in the middle distance. Mr. J. E. Grace's "Suffolk Village, Evening" (108), and Mr. Duncan's "Elm Trees near Windsor" (332), show much feeling in the treatment of simple subjects. There are some good things among the water-colours, especially some small studies, such as Mr. Morgan's little street views in Paris and Algiers (616, 626), Miss Fennell's "Transept of St. Mark's" (699), Mr. Fenollera's "Banderilla, Seville" (736), and Miss Fennell's "Door of Dante's Home at Florence," an excellent little study of a bit of building. The exhibition is certainly the best we have seen in these rooms for some time.

GREEK AND GOTHIC.

SOCIETY FOR THE ENCOURAGEMENT OF THE FINE ARTS.

AT the meeting of the Society on the 8th ult. Mr. Geo. Godwin in the chair, Mr. H. H. Statham gave a lecture on "The Principles of Architecture as Illustrated by the Greek and Gothic Styles." Commenting on the fact that architecture had not, like painting, any obvious basis of criticism grounded on comparison with nature, but referred only to abstract qualities, such as proportion, repetition, &c., he would endeavour to show that it reposed nevertheless upon principles which could be defined and illustrated; that there was, in short, a right and a wrong in architectural design. Architecture might be comprehensively defined as "building with expression," a definition which implied that there was something to express; and they must consider what this was. A building must in the first place express externally its plan and management, which was the practical basis of the whole; leading features in the design must correspond with leading points in the plan (illustrated by reference to one or two well-known buildings). Its design must, in the next place, express the construction; it must look strongest where it is required to be strongest, and must correspond in its expression with the direction of the lines of pressure in the construction. And the ornamental detail must be so applied as to emphasise those portions which, from their relation to the plan and construction; are really the most emphatic, and to assist in expressing their function. Decorative art pure and simple, and complete in itself, could be applied to a building at those points which were manifestly unconcerned in the structural statics (on Ruskin's principle, "wherever you can rest, there decorate"); but such adornments were rather something added to the architecture, which formed a framework for them, than a part of architectural expression. Lastly, the whole of the constructive and ornamental design must be suitable to the nature of the material employed.

The illustration of these principles in the Doric style was pointed out by the aid of drawings, and attention was then drawn to the Gothic style, as a most instructive contrast and at the same parallel to the Greek, as it employed a totally different principle of construction (the distinction between the statical conditions of the beamed and arched constructions being briefly explained), but, nevertheless, carried out all the principles of expression into the design in the same logical manner as the Greek style, though with such different results in form. The process of change from the column to the buttress, and the development of the Classic column into the Gothic pier, was touched upon, and the relation of each style to the material in which it was executed; the refinements of Greek architecture being essentially those of a style carried out in such a material as marble, which it would have been impossible to realise with the same completeness

in coarser material; this point being further illustrated by a comparison of some features of Greek and Gothic detail. The great object of studying such complete and logical styles as these two was not to imitate either of them, but to realise in what the abstract quality called "style" consisted, of which some illustrations were suggested, as well as some instances of the want of style in modern architecture, which put together incongruous materials or features upon no logical principle. Quoting from Viollet-le-Duc, to the effect that an author of the present day does not attempt mere imitation of the styles of past writers, since he is held in check by public criticism, but that there is no such safeguard of public criticism in regard to architecture,—"it presents the same aspect to the public as a book to those who cannot read: they may admire the binding and typography, but that is all,"—the lecturer urged that there could be no widespread improvement in modern architecture until there was a more general understanding of and a more general demand for it. What the architects wanted was, that the public would learn, adopting Viollet-le-Duc's simile, to read the book for themselves.

The lecture was illustrated by a small pamphlet of lithographed sketches handed to the audience, containing drawings of various portions of Greek and Gothic buildings, with the fronts of the Parthenon and Wells Cathedral, as representing respectively what might be termed the "Classic" and the "Romantic" elements in architecture.

IMPROVEMENT OF THE THAMES.

OF all the thoroughfares in London, the most important is that of our tidal river, which bears the traffic of the universe to our swollen population; and yet there is no other metropolitan causeway which has not a large amount of rates expended annually in paving, sweeping, cleansing, with other outlays for the convenience of passengers, and the accommodations of trade.

What the river requires is a well-regulated system of dredging, to remove the slime which defiles the exposed beds at low water; to *deepen the channel*, so as to allow a larger outflow of water throughout its whole width, but more especially on the east side of London Bridge, where at certain times of tide there is a fall and strong current, which impede ordinary navigation; for years, since the foundation of the bridge, its massive piers would seem to have occasioned an obstruction and accumulation of silt and waste, and notwithstanding the erection of quay walls between Blackfriars and Fulham, on the north, and between Westminster Bridge and Lambeth Palace, on the south side, which ought in some degree strengthen the current, still the shallows, filth, and stercor seem to increase.

The allusions so often made on the subject of embankment by the writer (the last in the *Builder* of the 3rd March) would appear to have caused some attention to this subject, which has hitherto been unheeded by the Corporation (whom it most concerns), or indeed by any writer or engineer of ability,—at least, so far as publication goes.

Many years back the embankment of the Thames was projected and advised by writers and publicists. In the year 1756 John Gwynne (the direct ancestor of Mr. J. E. A. Gwynne, C.E.) published a quarto volume, with four maps of projected improvements extending from the Tower to Kensington, east and west; and from the New-road to the River, north and south; giving a most copious description of his designs for grand boulevards, squares, crescents, &c.; and even at that time recommending the *erection of Thames quay walls;* the junction of Hyde Park with Kensington Gardens, the construction of a new palace, at an elevated point eastward between the Round Pond and the Aha; together with a rectification of the outer boundaries, and the demolition of the old palace.

Considering the importance of a deepened riparian approach and of facilitated commercial requirements to the extensive wharfs which fill up the Thames' margin on the south, from Westminster to London Bridge, and on the north from the Temple to the Tower, the outlay for a permanent dredging-barge with a proper working crew, so as to keep up a deep and safe anchorage, ought not to stop for one month a work of such paramount importance. But the formation of new quay walls, together with the alluvial clearances before alluded to, for easy access to wharfs of inestimable value, cannot surely be delayed, if only the right measures are taken for the purpose of forming a coalition or even a company of interested capitalists to carry out so desirable and essential a project.

There is no great commercial city or town seated upon a tidal river without the protection of solid quay-walls—even Dublin and the comparatively small Liffey has quay-walls of granite, extending (on both sides) over two miles; and then, in addition, a solid pier and footway extending two miles to a lighthouse founded in the bay. However, nearly all the great commercial towns of England have their solid docks, quay-walls, or shipping harbours. How, then, can the corporation of London account for inexcusable somnolence? The line of wharfs is at present most irregular, the buildings and stores advancing and receding at intervals, leaving recesses of slime for boats and barges at low water, and forming a boundary of confusion where there ought to be an equable line of solid quay-wall, together with a depth of water sufficient to float or unload cargoes at all times of tide. This would increase the value of wharf property immensely, whilst it would enable proprietors to carry on an increased trade. At the same time the long open causeway of Bankside, between Blackfriars and Southwark bridges, might be widened and utilised by the addition of say 20 ft., to the present marginal thoroughfare, which is strewn over with casks, bales, timber, and merchandise, leaving but a very restricted accommodation for passengers and vehicles.

So extensive and varied are the works required to complete the objects here referred to, that private enterprise, or the good intentions of several great riparian owners, can accomplish little; it is to the Board of Works alone that the public can look for an effective embankment. The admirable completion of the embankment, and, indeed, the useful and efficient improvements carried out and now in progress, under supervision of the Board, have excited not only the admiration, but the gratitude of the whole community; therefore to that Board is deferred the consideration of the question,—what can be done to rectify the deformities, expurgate the squalor, and increase the commercial advantages of our noble tidal river? T. H. H.

THE NATIONAL GALLERY AND THE METROPOLITAN BOARD'S PROPOSED STREET IMPROVEMENTS.

THE Metropolitan Board of Works' great scheme of projected street improvements now in Parliament has reached a stage (passed the second reading) which gives promise of its now being quietly passed through. One division of the scheme (section 6) proposes the formation of a commodious new street to continue Tottenham-court-road down to Charing-cross. The National Gallery building stretches rightangularly across the direct line that intervenes between the two street points here sought to connect. The Metropolitan Board's planned line, utilising for the immediate Charing-cross approach St. Martin's-place and the east side of Trafalgar-square, necessarily rounds the building by its eastern end, and as respects effect on the edifice is *nil*. In the general scheduling of the properties to be taken for the works, the protruding flight of steps of the St. Martin's Church portico was included. But the hitch in the Board's design, which now crops up by the declaration that these steps are never to be removed,—thus perpetuating a strait on the line, reducing the roadway at that part to some 25 ft. instead of the required 45 ft.,—is so damaging to the successful result of the intended improvement, that the Board would do well to stay its hand and try back, even at the sacrifice of a year's delay.

A ready way to the overcoming of this difficulty is conveniently at hand thus. By such a change in the line for the new street as would make the rounding of the National Gallery by its other end, skirting its western flank, and the approach to Charing-cross, *viâ* the west side of Trafalgar-square, and which at the same time would contribute the means to inestimable improvement in the position of that edifice, both immediate and deferred. For doing this, a practicable, and in all respects a favourable line presents itself to notice as follows. By a divergence of the present line at the point of its crossing Litchfield-street, and taking its course through the succession of sheds that lie between the two Prince's-rows; thence, by a cutting of 120 yards long, to Leicester-square, entering thereto at its north-east corner, and utilising its east side road, and passing out by a cutting driven through at the eastern end of its south side, and continued straight on down to Trafalgar-square, a run of 200 yards, skirting in succession the gable of St. Martin's Baths and Washhouses, the barrack-yard, a stable-yard, and the western end of the National Gallery.

I will now endeavour to show that the divergence of the line for the new street here suggested gives the more favourable route, irrespective of National Gallery considerations, or that of the St. Martin's-place obstructions. The length of the Board's line, as it at present stands, and the length the line would be under the proposed alteration, is exactly equal, viz., 1,200 yards, measuring down to the King Charles I. statue. But the gradients in the way are greatly in favour of the more western passage of the Gallery. Thus the principal of the fall to Charing-cross in the eastern passage occurs in St. Martin's-place and Trafalgar-square—a run of some 150 yards—and gives the gradient of 1 in 25; and where, by reason of the "way on" which vehicles of all kinds ever acquire in descending so steep a hill, must always be, more or less, a source of danger in the meeting of the traffic of the Strand. In the more western passage the fall to Charing-cross may be said to commence in Leicester-square, at Cranbourn-street, and is, by a gradual incline, thrown over a run of 500 yards, and gives a gradient of only 1 in 50. Point 2 is the local improvement that would be effected by the transmutation of the two courts, Ryder's-court and Earl's-court—the "faded" "light of other days!" as also that miserable quarter, the two Prince's-rows, into a fine, open, leading street. 3. By the more direct opening out of the shut-in parish of St. Ann's to the south and south-west parts. 4. By the direct connecting of Trafalgar-square and Leicester-square. 5. By the advantage to the work of the eventual finishing of the National Gallery, which the formation of a fine wide street along its western side will confer, would give the Metropolitan Board a better standing for the acquiring the concession of the long strip of Crown land required for the necessary widening of the new street at Hemming's-row and Orange-street. (Section 3 of the Great Scheme.)

As respects effect on the National Gallery, consequent on the possible adoption of the suggestions here put forth, may be noticed: 1. By the new street skirting its western flank the edifice would be given position of isolation in a part where, as now, it very wrongly adjoins on to the houses of a very thickly-populated poor quarter,—a consideration of no slight importance, viewed in connexion with the safe keeping of the nation's priceless treasures therein contained. 2. That when the Metropolitan Board's other intended new street comes to be made (section 3 of the Board's plans, the east and west line), which is to skirt the north front, the finished National Gallery will, on each of its four sides, be on a main leading thoroughfare, thus giving the edifice an enhanced dignity and importance worthy its destination and its occupancy of the generally-acknowledged finest site in London.

FREDERICK CRANE,
Churchwarden of St. James's, Westminster.

A PROPOSED FREEMEN'S UNION.

IN view of a recent vexatious strike on the part of masons, Messrs. Schofield & Co. are asking employers in the building trade to contribute towards the formation of a fund for a society or union having for its object to counteract the arbitrary action of the present trade unions, which would detach many of the best and most skilled workmen from them, and that these, strengthened by the accession of non-unionists, would form a body of men equal in work, if not in number, to their rivals. They suggest:

1. That the proposed association should be called "The Independent or Freemen's Union."

2. That the employers should establish the fund, and the men contribute to its support by weekly payments, as they now do to the trade unions.

3. That the one fundamental rule laid down by the employers should be that every workman should be allowed to work when, how, and as long as he liked.

4. That all rules as to internal management should be left to the workmen themselves.

They are prepared to assist by a donation the foundation of an institution similar in its object to that now roughly sketched out.

MEDALS AND PRIZES—INSTITUTE OF ARCHITECTS.

THE Soane Medallion (with the sum of 50*l.* added under the usual conditions of Continental study) has been awarded to the author of the design for a free library and public institute, distinguished by the motto "Choose well; your choice is brief, and yet endless." (William Scott, 3, Great Woodstock-street, W.)

In the same competition a Medal of Merit was awarded to the author of the drawings submitted under the motto "Ut migraturus habita." (J. L. Ball, 46, Church-street, Bolton, Lancashire.)

In the competition for Sir William Tite's prize of 30*l.* a certificate of Honourable Mention has been awarded to the author of the design for an ambassador's residence in London, submitted under the motto "Fortuna sequatur." (Henry Tanner, 21, St. Paul's-road, Camden-square, N.W.)

The Institute Silver Medal and 5*l.* 5*s.* were awarded to the author of the measured drawings illustrating Lavenham Church, Suffolk, submitted under the motto "Labor omnia vincit." (W. Gilbee Scott, 8, King Edward-road, Hackney.)

In the same competition a Certificate of Honourable Mention was awarded to the author of the measured drawings illustrating Laon Cathedral, submitted under the motto "Americus." (William S. Fraser, 34, Gower-place, Euston-square.)

The Institute Silver Medal was awarded to the author of the essay "On the Artistic treatment of Constructive Iron Work," submitted under the motto "Iron Style." (Hugh Stannus, 67, George-street, Portman-square.)

And a Medal of Merit to the author of the essay on "The Chronicles of Early English Art," submitted under the motto "Romanesque." (C. L. Bell, Chesterton-road, Cambridge.)

A MEMORIAL FOUNTAIN AT DULWICH TO DR. WEBSTER.

THE inhabitants of Dulwich have subscribed a considerable sum towards a memorial to the late Dr. Webster, one of the oldest inhabitants, and who for several years took an active interest in matters connected with the locality. The memorial will take the form of an ornamental drinking-fountain in grey and red polished granite, which has been designed by Mr. Charles Barry, the architect to the Dulwich College Estate, and which will be executed and carried out under his superintendence. The fountain is to be erected immediately in front of the entrance to the old college buildings and picture gallery, at the junction of the Norwood and Crystal Palace roads. At the meeting of the Camberwell vestry last week it was stated that the Metropolitan Drinking Fountain Association had resolved to take the entire charge of the fountain and its future maintenance, and to keep it supplied with a constant service of water, on the sole condition that the vestry should contribute the sum of 50*l.* towards the cost of laying on the mains, and the General Purposes Committee recommend the vestry to accept that condition and pay the required contribution of 50*l.*, which they believe to be fair and reasonable. Some objection was offered to contributing the sum named, but ultimately the recommendation was then unanimously adopted. It is expected that the fountain will be completed and inaugurated with some formality in the course of a few weeks.

WORCESTER GUILDHALL RESTORATION.

AT a meeting of the Worcester Town Council, On the 6th inst., the Guildhall Restoration Committee reported that they held a meeting on the 19th ult., when Mr. Rowe laid before the meeting the plans and drawings prepared by Sir Gilbert Scott and himself for carrying out the restoration of the Guildhall and wings, and they were examined, and some alterations were suggested for the consideration of the architects. The committee also reported that they held a meeting on the 26th ult., when it was resolved unanimously,—

"That the Council be recommended to adopt the plans for the enlargement and restoration of the Guildhall and wings, laid before this meeting, and to have the fittings of oak, as recommended by the architects; and that the architects be instructed to prepare the requisite specifications, and an approximate estimate of the cost, but to omit the proposed alteration of the Town Clerk's office, into a residence for the hall-keeper."

A statement of the accommodation available as shown by the plans was laid before the meeting, and the committee took into consideration the application for accommodation for the County Court offices, in the Guildhall buildings. It was resolved unanimously,—

"That until due consideration has been given to the requirements of the Corporation and their officers, this committee cannot recommend that offices should be provided for the County Court, but they recommend that if suitable accommodation should be found available, the officers of the County Court be afforded the opportunity of arranging for same."

The City Sheriff moved the adoption of the report. The Council would remember that on 28th of August, 1876, a report on the Guildhall from Sir Gilbert Scott was laid before the Council, and the city architect was instructed to prepare working plans. In compliance with the order of the Council plans had been prepared by Mr. Rowe, the city architect. The plans had been unanimously adopted by the committee, and he hoped the Council would pass them, so that after the great delay which had taken place some progress would be made towards the restoration of the Guildhall so that it shall answer all the requirements of the city as well as be an ornament and credit to the place. Mr. Rowe had sent him an approximate estimate of the work, in which he said that he had considered the extent of the works required in carrying out the restoration of the Guildhall, including the wings, and according to plans prepared by Sir Gilbert Scott and himself, and he estimated the cost of such works, excluding warming and fencing, at 9,100*l.* He (the Sheriff) had much pleasure in moving—

"That the plans for enlarging and restoring the Guildhall and wings be adopted, and that the fittings be of oak, and omitting the property known as the Town Clerk's office, which was intended as a residence for the hall-keeper."

The motion was ultimately carried with four dissentients.

THE BUILDING TRADE AND BRICKLAYERS.

A CASE of considerable importance to persons engaged in the building trade, and to bricklayers in particular, was tried at the Lambeth County Court last week. The amount claimed was nominal, but a principle of some consequence was involved. Mr. McQueen, a bricklayer, of Lower Norwood, sued Mr. G. Paul, a builder, of Gipsy-road, Norwood, for 9½*d.* in lieu of an hour's notice.

Mr. Washington, who appeared for the plaintiff, said that although the claim was only for 9½*d.*, still the question was a very important one, and affected a great number of men throughout London. There had been no decision on the point which he (Mr. Washington) was bringing forward, and the case had been brought before his Honour because of the great experience that court afforded in building matters. There was no few than 11,000 bricklayers in the district, and the decision of his Honour would be regarded as laying down a principle as to whether for the future bricklayers were to be discharged at any moment, or to have, as joiners and other persons in the building trade had, an hour's notice. The difference made by the masters between bricklayers and joiners was that joiners were entitled to an hour more for the purpose of sharpening their tools. If that necessity existed as regarded joiners, he did not see why the same time should not be allowed to bricklayers, as they had various tools that required sharpening, such as scutches, chisels, and brick axes. In the present case the plaintiff had been in the defendant's employ for four months, defendant being a large builder at Norwood. He went to work as usual at the commencement of the week on the Monday. At twenty minutes past four o'clock in the afternoon the foreman asked him to put up his tools and leave, as there was no more work for him. Part of his tools were half a mile distant from the work, and plaintiff contended that under the circumstances he ought to have had an hour's notice or an hour's pay.

The plaintiff having been examined in support of his case, Mr. Washington, in answer to the judge, said he had no witness on plaintiff's behalf, as to the existence of a custom.

The Judge (Mr. Pitt Taylor), in giving his decision, said that he had had the claim for sharpening tools before him more than once, and on every occasion he had disallowed it. The claim, however, was not only on account of sharpening tools, but in respect of the time taken for packing them up and going to receive the money. In the absence of any evidence of a contract between the parties, the plaintiff was not entitled to one or two hours' notice. The men were paid by the hour, and if the contract was for the hour the master would pay by the hour, and no more. In the case before him there was no custom in the trade allowing to bricklayers an hour's notice, and there was no law. Plaintiff, therefore, could not substantiate his claim. If there had been a special bargain, to the effect that he should have an hour's notice, he, of course, could have recovery. There must be judgment for the defendant, with costs.

In reply to a question from Mr. Washington as to whether the plaintiff was not entitled to recover for the loss of time in picking up his tools and going to the office to receive his money, the Judge replied that it might as well be said that a man was entitled to be paid for picking up his coat.

ARCHITECTS' ACTIONS.

SHEWBROOKS *v.* CAULFIELD.

THIS case, heard in the Nisi Prius Court, Durham, before Mr. Justice Lopes and a jury, is one of more than passing interest to architects, and occupied the attention of the Court two days. The proceedings are too lengthy to attempt publishing them *in extenso*, but the following digest embraces the whole pith of the dispute.

The plaintiff is an architect carrying on his profession at Newcastle-on-Tyne, and defendant is the owner of a building estate and speculator in land,—a class of men who have of late reaped large fortunes in the North of England.

A long array of counsel and solicitors were retained on both sides, and the expenses must be very heavy.

The action was brought to recover 35*l.* 9*s.* for work done, and also 175*l.* for breach of contract. The defendant owned building land near Gateshead, and the estate plan, in the first instance, was prepared by Mr. Hilman. After this the defendant called upon the plaintiff and expressed a desire to retain him as architect for the estate in question. Under instructions Mr. Shewbrooks measured the frontage of the estate, and discovered that the first plan was incorrectly set out, and suggested to the owner that there might be other mistakes, and therefore it would be advisable to prepare a fresh plan altogether. After this an agreement was entered into between the parties, the defendant engaging to employ the plaintiff for all professional work in connexion with the Gateshead estate, and to pay him for preparing plans for houses according to the following rates:—Tenement houses or houses in flats, 10*s.* 6*d.* each; all corner houses, 1*l.* 11*s.* 6*d.*; for defendant's own house, 3*l.* 3*s.*; and 1*l.* 1*s.* for all other houses. It was further agreed, in the event of selling or letting any of the sites on the estate, the defendant would make it a condition with the purchaser or tenant that the plaintiff should prepare all plans and make all surveys in connexion therewith, at special rates to be agreed upon, and for total work done, 35*l.* 9*s.* was demanded.

The defendant eventually sold the estate to a Mr. Galloway, and refrained from stipulating with the purchaser that the plaintiff was to be employed as the architect, according to conditions entered into, and Mr. Galloway refused to retain the plaintiff, and who actioned the defendant for breach of that part of the contract.

Mr. Shewbrooks estimated that if he had been employed as architect for all the houses built on the estate he would have received 194*l.* 15*s.*, and allowing that all the houses would not have been built for some few years, he reduced his claim to 175*l.*, making a total of 210*l.* 9*s.*

The defence set up was that defendant did recommend the plaintiff as architect to Galloway, but the latter refused his services, and the agreement was one that was not capable of being worked, and its loose construction ought not in equity to be stretched in favour of the architect. With reference to the first part of the claim a plan was prepared by the plaintiff for a house to be built for the defendant for his own occupation, and the back part of the house had, in order to allow the proper width of street required by the Corporation bye-laws, to be built narrower than the front portion, and the plaintiff had neglected to take those measures in his plan. The narrowing of the house at the back depreciated the value; and defendant made a counter claim against the plaintiff for damages arising from that depreciation.

The plaintiff denied this allegation. Witnesses were called, and the jury eventually found for the plaintiff, and assessed the damages at 150*l.* 9*s.*

QUESTION AS TO THE LEGALITY OF GATES TO CHANCEL SCREEN.

CHURCH OF THE ANNUNCIATION, CHISLEHURST.

IN the Commissary Court, on the 26th ult., Dr. Tristram, the Commissary-General of Canterbury, heard an application of some importance.

The vicar (the Rev. H. Russell) and churchwardens of the Church of the Annunciation, Chislehurst, applied for a faculty to erect a reredos and a screen, the latter with gates, in the church, now in the course of completion.

The proposed screen was the gift of a member of the congregation, not a parishioner, and the reredos was given by one of the churchwardens. The plans were produced by Mr. G. H. Brooks, proctor for the applicants, and were explained by the architect.

In the course of the discussion, the learned Commissary said there was no difficulty as to the faculty for, the

reredos, but as to the screen with gates. The design had been before the Archbishop of Canterbury, who had not signed the plans, but had referred the matter to him as Commissary-General.

Mr. James Brooks, the architect, was sworn, and explained that the screen was to be placed at the chancel, at the top of which would appear a large cross. There was no sculpture, but mural paintings on the panels representing the Crucifixion of Our Lord.

Mr. Jeune, counsel in support of the application, addressed the Court, contending that the screen was not only legal, but was required to be placed in front of the chancel. Before the Reformation it was, with a crucifix or rood upon it, a necessary adjunct of the Church in England. After the Reformation the rood was removed, and the screen or partition remained. The learned counsel cited Wheatley's Common Prayer-Book, and the writings of Hooper, Calvin, and other writers, to establish the fact that when the rood was forbidden in churches the screen was retained. He traced its recognition from Edward VI. to the present Prayer-book, and from the disputes which had occurred submitted that the rubric in force not only permitted a screen, but showed that it was legal. No doubt they had fallen into disuse, but they were to be seen in numerous churches, where they had been placed a long time ago. It was necessary to provide a screen or gates to the chancel.

Dr. Tristram observed that if there was not room in the body of a church persons could go within the chancel. The seats within the chancel were at the disposal of the ordinary.

Mr. Jeune said that rails were provided near the altar or Communion-table, and there could be no objection as to gates, which would keep persons from approaching too near, and it was felt that there ought to be some distinction between the chancel and the body of the church. Referring to the St. Paul and St. Barnabas case, before Dr. Lushington, and afterwards before the Judicial Committee of the Privy Council, he said Dr. Lushington did not order the gates to be removed, and could not say they were illegal. Subsequently the Privy Council made no order on them, but declared that a cross as then placed was not an unlawful decoration. At the present time churches were often open all day for private prayers, and the gates would only be closed when there was no service, but open when any divine office was being performed. The screen was tracery work, and seen through by all persons. There were no symbolisms connected with it, but there were articles which required to be protected in the chancel when no service was being performed, and which might be removed.

Dr. Tristram said the general practice in the diocese of London since he had been Chancellor was to object to gates at the chancel.

Mr. Jeune urged that on the authority he had quoted, it would appear that the law required screens to be placed to divide the chancel from the body of the church, and he therefore asked the Court to grant the faculty, as the case was, he might say, *res judicata*.

The Commissary-General said it was a question of some importance, and he should take time to consider. He had no difficulty as to the faculty for a reredos, but he had some doubts as to the proposed screen with the gates.

THE PROPER POSITION FOR THE DECALOGUE.

THE Ven. Chancellor Espin presided at a sitting of the Chester Consistory Court, on the 1st inst., when

The Rev. R. Greenall and one of the wardens of the parish church of Stockton-heath, near Warrington, appeared, and put in enlarged plans of the reredos proposed to be placed in the church, and for which, along with other matters, at the last court they sought a faculty.

The Warden, in reply to the Chancellor, said the architect now proposed to place the Ten Commandments on the east wall of the south aisle, which was a very conspicuous place, and better suited for the purpose than the entrance to the chancel.

The Chancellor.—But you see I am bound by the canon.

The Warden.—We thought that would have complied with the canon?

The Chancellor.—I think not, strictly speaking. The advertisement with the canon specifies that the commandments must be put up on the east wall, over the holy table; but at the same time I do not wish to press that any more than I am bound to do. The commandments were placed there to catch the eye of the communicant as he came to the table, and to inspire him with their beauty and fitness to be put in the communion office. The suggestion of your architect will hardly have this effect, will it?

Mr. Greenall.—No: It would not. But they can go on either side of the Communion-table, over the Hallelujs.

The Chancellor.—I think that a very good suggestion. That will do.

Mr. Greenall.—Then we may have our faculty?

The Chancellor.—Certainly.

The faculty was then decreed, on condition that the Ten Commandments are placed on the east wall, just over the reredos.

THE THAMES VALLEY FLOODS.

A REPORT by the Conservators of the Thames on the works in the upper districts of the river, and the floods in the Thames Valley, was issued on the 27th ult. It states that only four of these floods have occurred in fifty-six years, and adds:—

"The question, therefore, arises, are these unusual floods sufficiently frequent, and is the damage caused by them so great, as to make it advisable for the riparian landowners and occupiers, on whom the charge must necessarily fall, to incur a very large outlay with a view to prevent the extension, or to mitigate the effects of such floods? Various schemes for the prevention of extraordinary floods have been suggested, among them the construction of impounding reservoirs. Let it be assumed that, in order to receive only one inch of rainfall over the 3,944 square miles forming the catchment basin of the Thames above Kew, six reservoirs were to be constructed along the course of the Thames westward of Teddington; if each reservoir were 15 ft. deep, it must be 3½ square miles in extent. Even supposing the necessary land could be procured, the cost of this land and the formation of the reservoirs would amount to at least a quarter of a million sterling for each reservoir. The alteration of the road bridges, which are so obstructive to the flow of the water, the deepening of the river, lowering of the weirs, and construction of tumbling bays, on a greater scale than has hitherto been practicable, would assist the escape of flood-waters; but these operations involve an expenditure beyond the means, and an interference with private rights beyond the legal powers, of the conservators. It is to be hoped that no amount of temporary inconvenience or damage will induce the Legislature hastily to authorise the construction of impounding reservoirs, or carrying out other schemes on a larger scale, which are certain to be extremely costly, and may not prove effectual remedies. The riparian landholders and occupiers should carefully consider whether the execution of the extensive works suggested by various persons may not entail a far heavier burden than any damage caused by these temporary and rarely recurring floods. If excessive floods are to be dealt with, a searching preliminary inquiry should be instituted, for it is manifest that large powers and ample funds, only to be obtained by an Act of Parliament, must be provided if all the low-lying lands in the Thames Valley are to be secured against every possible inundation.

SAXON STONE AT ST. MARY-LE-WIGFORD, LINCOLN.

THE following letter, addressed to the vicar of the above parish, has been published in the *Lincolnshire Chronicle*:—

You will perhaps recollect that some time ago I promised to try and find out the meaning of the inscription on St. Mary-le-Wigford Church, which has puzzled so many generations of antiquaries. Most persons who pass along the High-street will have noticed not only the remarkable tower, but also a square inscribed stone built into its western face, and surmounted by another of a triangular shape. The lower inscription, which is in Latin, is fairly easy to decipher, and appears to be the monument of a certain Sacer, son of Bruscus, a Senonian Gaul, and of his wife Carssouna, and son Quintus, who lived perhaps in the first century after Christ. (See *Corpus Inscr. Lat.*, vol. vii., No. 191.) This tombstone seems to have attracted the eye of the founder of the church, who built it into his tower, and left a record of his work in the five lines which he inserted in the vacant space at the upper part. It has, I believe, generally been concluded that the church was erected by Saxon builders soon after the Conquest. It is natural to suppose that the occupation of the upper town by a Norman castle and cathedral would dislodge a good many of the old inhabitants. However this may be, it is certain that the inscription is Anglo-Saxon or Early English, and that it records the foundation of the church. The interpretation of it has long been regarded as a great difficulty, and it was not till a year or two back that Professor Mullenhoff, a German scholar, hit upon the first step towards its explanation. He saw that it was to be read upwards, not downwards, and that the last words were *Criste to lofe and* (1) *Sancte Marie*, "to the praise of Christ and Saint Mary." I am now able to send you our own Professor Earle's interpretation of the first or lower lines, made from the copies given by Hübner, in his *Inscriptiones Britannie Christiane*, No. 170. It must be considered at present as conjectural; but it is certainly much nearer the truth than any that has been given before, and a comparison of it with the original will probably bring out what is necessary for the final decipherment. His restoration is as follows, the uncertain letters being dotted. The runes represented by Ƿ (and) and Ƿ (w) are not very uncommon:

MARIE
OFETSCE
NCRISTETOL
NꝶFIOSGODIA
EADPIGMELETPIRCEA

That is to say, *Eadwig me let wircean & fios godian Criste to lofe & Sancte Marie*. "Eadwig had me built and endowed to the praise of Christ and Saint Mary." There are, as you will see, some letters in this which do not agree with the ordinary readings of the stone, and Mr. Earle is in doubt between *Eadwig* and *Elfwig*. There is also a difficulty, Mr. Earle tells me, in the use of the genitive *fios* (cp. fee) after the verb *godian*, but the general sense seems to be very probably made out. Mr. Earle also makes an interesting suggestion as to the origin of the name *Wigford*. Does it perhaps contain the last syllable of the name of your founder, and was the place originally called *Eadwigford*? Some Lincoln antiquary may perhaps be able to answer this question, and even to throw some light on his history. It is certainly a subject for congratulation that we, who have such a unique monument in Lincoln, should be no longer in ignorance of its meaning.

JOHN WORDSWORTH.

DO OUR WORKMEN IMPROVE?

SIR,—We are generally supposed to be living in an age of progress, but I fear that the very reverse of the supposition is the actual fact in certain matters seriously affecting the building trade.

Where is the pushing, energetic, and intelligent artisan, who (as was the case some twenty-five years ago) emerges from the dead level of the "bench" or the "banker" to worthily fill the position of clerk of works?

I find it very difficult to get one who is at once trustworthy, sober, and technically competent; and I hear the same complaint on all sides from my professional brethren, and even from builders.

Are trade unions in any way responsible for this state of things?

I had occasion this week to advertise for a clerk of works to superintend a "plain straightforward job," and in response received about forty applications on the following day. Of these only two were such as I could in any way conscientiously recommend to the consideration of my clients.

As there may be amongst your numerous readers some young man who feels that he is fitted for something better than paying his "subscription to the society," and receiving the "regulation" wages, I enclose one of the applications received in response to my advertisement, so that he may have some idea of the sort of person he is likely to meet in competition if he aspires to the honourable position of clerk of works.

F.R.I.B.A.

SIR,—Seeing that you want a clerk of works A and I want a simelar situation I bring my self before your notice for Same In the first place I am a Joiner to trade and is fuly master of the trade I care not what branch it may be I have been an emprover in days past After I held the situation of foreman in a larg firm and got two years sartifcate but unfortunatly I lost it then I acted in the same way for others of less importances and I beleive can get a recomandation if neserry my age is 43 years and is perfectly sober fuly understands plans is able to draw same can take out quantietys for any Job understands mesurments up to square and qube root or angels of any degree in brick work slating or other work in the building trade So you can think over this And I remean yours

WHAT IS LAW?

A QUESTION asked by many who follow the reports of the daily proceedings in certain places called law courts. Take a recent theatrical dispute for a late example, although there is not a sitting but would afford others. One side is supposed to have his rights by the decision being given in his favour; the day following an easy night on the one side, and an uneasy night on the other, the very opposite decision overthrows the previous one. Surely one of the expounders of supposed law must be wrong; and those who may hereafter happen to seek his decision cannot have much confidence in him. Law may mean long purse, some may say it means individual opinion. Ought that to be so? Ought not law to be law, as understood by the words, and not reversed at each step taken by the disagreeing parties? If it is mere opinion, why should the country be put to such an enormous expense to keep up our so-called law courts and appertainments? Men are able to give wrong opinions without being especially and expensively trained and kept, and having costly buildings to sit in. Again, some may say it is custom. But a third may say, "It is my custom,—consequently law,—to pick pockets." Then others may reply that it is custom,—consequently contradictory law,—to punish. It is high time that when contending parties fight to have their disagreements settled they may not feel that those who are able to produce the greatest number of sovereigns may gain the day, and sometimes, as shown by contradictory decisions, what has once been considered not their rights. The remedy is in the hands of the law-makers.

Y.

FRAMED HOUSES OF WOOD.

SIR,—In Number 1,773 of the *Builder* you inserted a letter from a correspondent, initialled "S. M. P.," in relation to a "wooden house from Norway," and asking for information from your readers as to the "result of time upon a building constructed of wood," and from "whence could one be obtained;" also, "whether the plan (of wood alone) would be likely to succeed in building labourers' cottages, where it is desirable to keep the expense as low as is reasonably possible."

In reply to these questions, I beg to inform the writer that portable framed houses of wood could be manufactured in Canada and imported into Great Britain at a very reasonable cost, and that as to their adaptability for labourers' cottages there cannot be a question of doubt. They wear well and last long, seldom require repairs, and can be made very warm in winter, and are always free from damp. Nine-tenths of the suburban residences—and some of them are exceedingly ornate and tastefully designed—in the United States and Canada are constructed of wood. A wood-framed house, faced with single rows of brick, is an exceedingly warm house in winter and cool in summer.

I have no doubt but that lumber could be obtained in Canada for such purposes at very reasonable rates, and if an experiment were made on a small scale, it would probably be

attended with sufficient success to warrant a further trial.

I shall be happy to afford further information on this subject if required.

F. N. BOXER, Architect,
Ed. Canadian Mechanics' Magazine.

Montreal.

SIR,—My attention has been drawn to a letter signed "Charles Pinn," in your paper of the 17th of February last.

My house was landed at Exmouth, and I am not aware that any other assertion in that letter is correct.

By publishing the letter in question, you point me out as an exponent of a new idea that has failed.

I beg to point out to you that there is nothing new in my building a house like other people, although those other people may be Norwegians, Swedes, Swiss, Russian, or American. I have a photograph before me of a wooden church built in the twelfth century, and yet in existence. I did not originate the idea of building that church of wood, or the wooden houses that have been built for centuries by the nationalities I have mentioned. Your correspondent writes that the idea has not been taken up in this country. I am not a builder, and it is not my business to get the idea adopted, and it is a matter of no moment to me whether my example be followed or not. If, however, facilities were afforded, at a proper cost, of building similar houses, they would be built; and I say this positively, as I receive more letters than I can reply to asking me to get such houses built.

I cannot see any failure in my action in the matter. I have lived in the house that your correspondent condemns for five years nearly. I am perfectly satisfied with it, and, as far as I am concerned, it has been a success beyond my expectations. It may occur to you that there is no reason why my house should be a failure, because it is built in England and not in a foreign land.

My only reason for writing is to protest against being written at as a person who has failed; and, having made this protest, I have not time for further correspondence.

JOHN FULFORD VICARY.

North Tawton, Devon.

SUNDERLAND SCHOOL BOARD.

SIR,—Here is a grand chance for some architect's pupil:—

The Sunderland School Board will give 10*l.* and 5*l.* for the second and third best plans for designing a school to cost 10,000*l.*, and into the bargain they claim the first designs (if it be exactly what they want) for 20*l.*, the same "to become the absolute property of the Board. The Board do not bind themselves to employ the author."

There's a chance; they will give 10*l.* more for sucking your brains if it be exactly what they want.

In 1873 they invited architects to compete for the first school; and thirty-four innocent architects, thinking they would be engaged, sent in plans. Two Fellows of the Institute got the second and third premiums, and an auctioneer and brickmaker the first, who has been able to do all their work until now, when it appears they are in want of more help.

Go in and win.

I send the Editor my card, and I hope the competitors will do the same.

STRAIGHT TIP.

"OUR LORD CROWNED WITH THORNS" AT ST. PETER'S, EATON SQUARE.

SIR,—The bartering of the heirloom of this church for an income of less amount than a Sunday morning's collection is a notable incident. Your report of the churchwardens' application for a faculty tells how the picture was removed from its original position as an altar-piece, probably to make room for a more fashionable decoration. Then it was stowed out of sight in a gallery, except for a time when the Royal Academy accepted it for exhibition. Now Sir F. Grant acquires it for 1,000*l.*, and by leave of the Consistory Court the dividends arising therefrom will be applied in "ornamental decoration."

The writer has no acquaintance with the church or the picture, but the above facts show that it is a valuable example of one of the last of the Old Masters,—one who is remarkable for serious purpose and individual style. When it is added that this was a gift by the British Institution at the opening of the church more than fifty years ago, it seems impossible that any reredos, painted window, or other decoration whatsoever can possess any fitness or beauty that can be weighed in the balance with the claims of the subject, the artist, the donors, and the long local association of this despised treasure.

The process of denuding churches and crowding museums has had a long day, and the public collections are wearisomely redundant of pictures of the leading subjects of sacred art. Would it not be well rather to exhibit some of these on the naked walls of our churches and cathedrals, instead of taking from the latter even that which they still have? The decoration of St. Paul's Cathedral seems to have vanished as an unsolved question; but perhaps the "coldness" of the interior would be overcome by the same expedient we adopt in our dining-rooms of hanging upon the walls the very best paintings we can procure.

H. GUNDRY.

COST OF WATER TO BUILDERS.

SIR,—Permit me to call the attention of builders to the recent changes in the charges made by the water companies for supplying water to builders for the erection of new buildings.

The charge used to be 1s. per rod for brickwork and 1d. per yard cube for concrete, making a job of about 5,000*l.* cost for water 60s. to 70s. Now a change has suddenly been made, and a charge is made on the value of the building irrespective of the water it may require, at the following rates:—3*l.* 10s. for a house costing 1,200*l.*; and above that amount 5s. per cent.; and one company 6s. per cent.; making (say) a 5,000*l.* job cost for water as follows: up to 1,200*l.*, 3*l.* 10s.; 3,800*l.*, at 5s. per cent., 9*l.* 10s.; total, 13*l.*

Now, sir, irrespective of this charge being, as I think, enormous, it is not fairly adjusted; for a building with an elaborate stone front, or with a large amount of iron in its construction, requires very little water so far as the stone and ironwork are concerned; or, suppose the exterior was of polished marble and the interior fittings of Spanish mahogany, why should the public pay for this to the water companies? Surely the fairest way would be to pay for the water used; say a moderate price per 1,000 gallons.

This is a question that concerns the public more than the builder, for they must ultimately pay for it; so the sooner public attention is awakened in this matter the better.

A.

P.S.—I know of two large jobs where, in consequence of the high rate of the water company, the builders sank wells, and obtained an abundant supply for something less than a quarter of what the company's charges were.

The following is a list of charges:—

NEW RIVER COMPANY. Estimate of cost of building.		SOUTHWARK AND VAUXHALL WATER COMPANY. Estimate of cost of building.	
£100	10s. each.	£100	13s. each.
125	13s. „	125	15s. „
150	15s. „	150	16s. „
175	18s. „	175	21s. „
200	20s. „	2 0	25s. „
225	23s. „	225	30s. „
250	25s. „	275	33s. „
275	28s. „	300	34s. „
300	30s. „	325	36s. „
325	32s. „	350	39s. „
350	35s. „	375	42s. „
375	38s. „	400	44s. „
400	40s. „	450	46s. „
450	42s. „	500	56s. „
500	45s. „	600 to £700	63s. „
600 to £700	50s. „	800 to 900	84s. „
800 to 900	60s. „	1,000 to 1,200	105s. „
1,000 to 1,200	70s. „	Above 1,200	6s. per cent. additional.
Above 1,200	5s. per cent. additional.		

CAUTION.

THERE is a petty larceny rogue going about obtaining small donations from builders and old material purchasers by pretending to be a clerk in an architect's office able to introduce them to business. This is a mutual annoyance to the architect and the persons whom he sends. A notice in your widely-read paper will, it is hoped, put a stop to his trade. The writer has had for some weeks three or four letters daily, besides visits from disappointed inquirers. From some the rogue has levied 1s., from others as much as 2s. 6d., and, being a thirsty soul, when he could not obtain money, he has asked for the price of a glass of beer. I wish that some one would introduce him to the police and stop his practice.

R.

CEMENT AND IRON.

WILL any of your readers inform me of a cement that will not readily dry up and crack when exposed to the weather, and is sufficiently adhesive to stick to galvanised iron when placed in joints of sheets? I have tried white and red lead, but they always dry rapidly, and fall out of the joints.

O. P.

ARCHITECTS' BENEVOLENT SOCIETY.

THE annual general meeting of this society was held on Wednesday afternoon last, in the rooms of the Royal Institute of British Architects, kindly lent for the occasion. In the unavoidable absence of the president, Mr. Sidney Smirke, R.A., the chair was taken by Mr. George J. J. Mair, F.S.A., treasurer.

The annual report, which was proposed for adoption by the chairman, stated that the hope expressed by the Council in their report for the previous year,—that a large increase would accrue to the Society's funds in the year then entered upon,—had hardly been realised. So sad appeared to be the prospects of the Society that the Council resolved upon issuing a special appeal, the result of which would be made known in the report for the current year. Without anticipating what might be said in that report, the Council had reason to be thankful for the way in which the appeal had been so far responded to. During the year 1876 the Council had received, in donations, 98*l.* 1s. 6d., and in annual subscriptions 220*l.* 5s., there being a small increase in the amount of the donations as compared with that of the previous year, but a decrease to the amount of six guineas in the subscription. The total income for the year, including these items, together with 63*l.* 18s. 9d. dividend on invested funds, and 78*l.* 1s. 10d. balance brought forward from last year, was 440*l.* 7s. 1d., whilst the total claims on the Society had been 408*l.* 9s. 8d., leaving a balance of 31*l.* 17s. 5d. in hand as compared with 78*l.* at the date of the previous report. Twenty-one applicants were relieved during the year, against twenty-six in 1875.

The report was adopted, together with the balance-sheet, and it was announced that the following members of the Council retired by effluxion of time, viz., Messrs. D. Brandon, J. H. Hakewill, Harry Oliver, John S. Rhené, and D. Mocatta. In their stead Messrs. Chancellor, George Godwin, Isaacs, Seamell, and H. Saxon Snell were unanimously elected.

Messrs. J. S. Lee & T. E. Knightley were elected auditors for the ensuing year; Messrs. T. Usher, of Bedford, and — Thompson, of Newcastle, were elected corresponding members of the council: the president and other officers were re-elected; and votes of thanks were given to the president, council, and officers for their services; to the auditors for the past year (Messrs. Christopher Eales and E. C. Robins); and to the Royal Institute of British Architects for their kindness in granting the use of their rooms for all the meetings of the Society.

It was incidentally stated that in response to the special appeal which was recently made for funds, between 300*l.* and 400*l.* had been received, although the appeal had only been partially made and responded to as yet. This was generally regarded by the speakers who took part in the discussion as exceedingly satisfactory.

Mr. Robins suggested that application should be made to some of the seventy-eight City companies; many of them would, he was quite sure, help the Society.

Mr. Edwin Nash coincided, and said that he had succeeded in getting his company to give thirty guineas to the Architectural Museum.

Mr. Robins said the subject of the Architectural Museum came before a company of which he was a member, but it was not thought to be "particularly necessitous." This could scarcely be said of the Architects' Benevolent Society.

The meeting closed with the usual vote of thanks to the chairman.

"THE PULLEY OF THE FUTURE."

SIR,—My attention having been directed to a letter under the above heading, which appeared in your paper of the 24th ult., signed "Edmund Beckett," I feel myself called upon to reply briefly to the statement made by that gentleman.

I do not propose to go into details upon the question he has raised, as, in the first place, it would be an intrusion upon your valuable space and, secondly, I prefer to hold in reserve such detail to adduce elsewhere, should I find it necessary to do so.

Sir Edmund Beckett has not only volunteered the statement that I am not the "true and first inventor" of the pulley in question, but he invites competitors in the same line to infringe the privilege which the law has exclusively accorded to me.

However, in answer to Sir Edmund's unqualified statement, I shall simply say that I am the true and first inventor, and, as a matter of courtesy only, I invite Sir Edmund Beckett, or any friend of his, to call at my house and read his own two letters of April 24th and 28th, 1874, and also a letter of Messrs. Longmire & Burge, of November 6th, 1874. The reading of these letters, I venture to think, would refresh the memory of Sir Edmund Beckett, and induce him, I hope, to withdraw the detrimental statement he has made regarding me as a tradesman, to say nothing of the imputation he has cast upon my character.

J. F. MEAKIN.

A Large Oak Tree.—A few days ago the Tyberton timber was sold. The sale was rendered specially interesting from its including the "Monarch Oak," said to be the largest tree in Herefordshire. The reason for cutting down this King of the Forest was because it has been three times struck by lightning within the last seven years, and though these repeated attacks have shattered a great part of its top, it still contains upwards of 1,000 cubic feet of timber; its girth is 66 ft.

SCHOOL OF ART NEEDLEWORK EXHIBITION.

THE collection of Art Needlework just now arranged for exhibition in the rooms of the school at Kensington, presents so brilliant and attractive a *coup d'œil* that the eye of the critic who works not with the needle, and is a stranger to the mysteries of the craft, is at once taken captive, and his judgment for the moment subdued to indiscriminate admiration. When we reflect what sort of work ladies used to do twenty years ago, and look at the beautiful design and elaborate workmanship (or workwomanship) of many of the articles exhibited here, it seems perfectly ridiculous for pessimist critics to say that there has been no advance in art, that there is no real art in the present day, and so on. It is only when our judgment is a little sobered down by familiarity with the show that we note in a cooler and more critical mood one or two points in the character of the designs which are open to question. Such an exhibition as this may, no doubt, be taken as meant to show all the possibilities of needlework. One of these, however, is the possibility of attempting too much. For instance, as to figures. Take No. 1, panels for a cabinet, two figures called "Rose" and "Daffodil," designed by Mr. Walter Crane, of which the latter is much the best. Is it desirable to work figures with mouse-coloured flesh, and in which the anatomy of the body so far as it is seen (arms and hands, for instance), cannot be truly given? Mr. Crane's designs for large figures, "Salve" and "Vale," for Portière curtains, suggest to some extent a similar question. The figures are fully draped, and the action good, but the faces absolutely expressionless. We only know the idea they are meant to represent by the scrolls they hold up, and the symbol of the rising sun in one and the moon and stars in the other. This is an illustration of what some critics have truly said, that decorative art is bringing upon us the use of the figure as a mere accessory of decoration, without its higher human expression. It is worth while to note this,—to remember that needlework has its artistic limits. The representation of artificial objects which should be absolutely symmetrical, again, is not the best application of the art; see the "wall-hanging representing the elements," for instance, with the candelabrum of which the lines are all crooked and twisted. Needlework, we think, is not best employed in representing objects in which bi-fold symmetry is essential; on the contrary, it is particularly suited for a certain freedom and irregularity of design, a symmetry without complete symmetry, as we may say.

This is well illustrated in the very rich and fine curtain design at the end of the large room opposite the entrance, and in the furniture that stands under it, the sofa especially. Still more finely are the true qualities of needlework, and its proper relation to nature, shown in the magnificent piece of work (111), founded on the honeysuckle, designed by Mr. W. Morris. Here the suggestion of the natural flower as to form and colour is worked up into a design of remarkable richness, and of a character completely suited to the process and the material, and the management of the materials so as to produce the fine gradations of colour and shading is such as to involve almost what we might call an intellectual effort, in addition to the beauty and elaboration of workmanship. Another piece of work from the design of Mr. Morris (No. 31) strikes us as very admirable; it is a wall-hanging based partly on foliage of the acanthus type, worked in outline on "Bolton Sheeting"; it is difficult to believe, on only a close examination, that materials so comparatively coarse should have such a rich and even sumptuous effect when seen at the proper distance. Mr. Aitchison (to give due honour to the architects) is the designer of an admirable quilt, in which pomegranate and sunflower are employed, and of one or two other objects distinguished by excellent taste in colour and design.

Another question that suggests itself to us from the critic's point of view, is that ornament should be proportioned in richness and value to the position it is to occupy. A wall-hanging may rightly show any amount of elaboration; it is always before the eye. But to put a very beautiful and delicate ornament on the seat of a chair, for example, seems a mistake. A chair is meant to sit on; but in this case you are called on to admire the ornament so much that you are almost afraid or ashamed to sit upon it; and, at all events, the moment you put the article to its proper use you lose sight of the ornament. We make a suggestion, too, as to the use of the word "art" as a distinguishing epithet. We see in the rooms some very admirable specimens of furniture designed by Mr. Norman Shaw, and called "Art Furniture." Why not simply "Furniture"? All furniture properly made and designed would have the qualities which are meant to be implied in the term "Art Furniture," and all furniture ought to be properly made and designed; and the same criticism applies, not so strictly perhaps, but in great measure, to "Art Needlework." To use this distinctive appellation is to recognise the existence of furniture and needlework which are not artistic; which is exactly what we want to get rid of. We want it to be a *sine quâ non* that everything has its artistic principle and method, without which it is worth little.

SURVEYORSHIP ITEMS.

Wednesbury.—At a meeting of the Wednesbury Local Board on the 5th inst., the committee of the whole Board appointed to investigate the charge against the surveyor (Mr. Fereday) reported thereon. As we have already stated (p. 105, *ante*), the charge was made by a member of the Board (Mr. Stevenson), who alleged that the surveyor was interested in certain contracts in the neighbouring town of Coseley. The committee reported that, having heard the evidence of Mr. Stevenson's witnesses and the statement of Mr. Fereday himself, they had arrived at the conclusion that the surveyor was to a great extent open to blame. Nevertheless, taking into consideration his long services (between sixteen and seventeen years), they felt that a strong reprimand would meet the case; they felt that he had to a great extent committed himself, but they did not believe he had derived any profit, in a monetary sense, from his transaction with Harthill, the contractor concerned. A discussion extending over two hours took place. Ultimately it was resolved that the report be referred back to the committee for reconsideration, and be brought up again in eight weeks' time.

Richmond.—At a special meeting of the Richmond Select Vestry, on the 6th inst., the committee to whom the sixty applications for the appointment of surveyor were referred, presented a printed analysis of the applications, with a report stating that they had examined the letters and testimonials of the applicants, and considered the following to be the most eligible candidates, viz.:—Mr. Alfred Creer, of Halifax, salary required, 250*l.*; Mr. A. F. Goldsmith, of Brixton, salary required, 200*l.* for first two years; Mr. Samuel Mathers, of Surbiton, salary required, 250*l.*; Mr. F. S. Brunton, of Durham, salary required, 250*l.*; Mr. Charles F. Wike, of Leicester, salary required, 230*l.* to 250*l.*; and Mr. William J. Ellison, of Liverpool, salary required, 250*l.* After some discussion it was resolved to ask the whole of the selected candidates to attend a special meeting of the vestry. The *Richmond and Twickenham Times* commenting on the discussion, says:—"As to the salary of the future surveyor, Mr. Dermer spoke to the point when he said, if it were necessary, 'The Vestry ought not to shut up their pockets at 250*l.* if they found a suitable man.' A sound and thoroughly competent road-maker, at an annual salary of 300*l.*, would certainly prove a far better investment to the ratepayers than an indifferently efficient servant at 200*l.* per annum. Here indeed cheeseparing would be a terrible mistake." Local papers do not always write so sensibly on such points.

Books Received.

Pioneer Engineering. By EDWARD DOBSON, Assoc. Inst. C.E. London: Crosby Lockwood & Co. 1877.

THE key-note of Mr. Dobson's present work is, "There is nothing very attractive in the life of a pioneer engineer. The duty is generally very hard, the pay scanty, and the work quite unappreciated by the public. But there are few ways in which a man can spend his life more nobly, more usefully, and more happily, than in devoting his practical skill and scientific knowledge to the preparation of a new country for the healthy and prosperous settlement of thousands of his fellow-creatures. To those so engaged the author dedicates these pages, which embody the experience of a quarter of a century, with a hearty prayer for God's blessing on their work." And we think the author does well to impress on those engaged on pioneer work that their aim should be, not the construction of great works which will bring them professional credit and reputation, but the careful study of the features of the districts under their charge, so that, by the avoidance of all unnecessary works, they may be instrumental in facilitating settlement, and on opening up the country out of current land revenue rather than by means of borrowed capital, the use of which, in countries like Australia and New Zealand, should be confined to the execution of reproductive works.

In three chapters the general work of surveying and levelling and setting out curves is set forth, being followed by instructions in the art of selecting the best lines for roads and railways, and for town sites, and on the storage of water, on drainage, and on town sewage, with chapters on carpentry, masonry, tunnelling, and pile-driving. It must have been much more easy to treat of those first subjects and of these last than of those which are intermediately placed; for in a new country people want to get to work and earn money, no matter how, and are impatient of advice in things thenecessity of which is not at once apparent. Therefore, however necessary the engineer may know it to be that a town site should be drained, he is, after stating what should be done, forced to admit that "It is not easy to see how these desirable objects are to be carried out, if town-lands are sold without any conditions respecting levels or drainage; and it would be much better, in all cases of new townships, that the levels of the streets and of the public drains should be carefully defined previously to the sale of town lots. Very great advantage would, no doubt, arise if the streets in all new townships could be brought to their proper levels before the sale of the adjacent lots, the cost of these works being made the first charge upon the purchase-money;" and the experience of the author enables him to say that in most cases the improved value given to the land when the streets are formed and drained before beginning to build upon the land would be more than sufficient to recoup the outlay.

Mr. Dobson's well-known ability and long practical experience in the colonies, as well as at home, entitle "Pioneer Engineering" to the attention of not only intending emigrants, but of the Colonial Office.

Lessons on Electricity. By Dr. JOHN TYNDALL, F.R.S., London: Longmans, Green, & Co., 1876.

WITH some amplification we have here the substance of the Christmas Lessons on Electricity at the Royal Institution, almost every page of the little volume being illustrated by woodcuts of the apparatus used in the demonstrations of the Professor. The descriptions of the experiments are remarkably clear and concise.

The Theory and Action of the Steam Engine. By HENRY NORTHCOTT. Cassell, Petter, & Galpin: London, Paris, and New York.

THE steam-engines we at present make transmit to the machinery only about a tenth part of the energy given out by the coal consumed, and the author thinks it is not easy to account for the slight increase of efficiency attained since the time of Watt, but suggests that "it may have arisen to some extent from engineers not having kept steadily in view the functions actually fulfilled by the steam-engine in the transformation of energy;" and in this little treatise he traces the energy liberated by the combustion of fuel through its several phases, to indicate the sources of its present wasteful dissipation, and to show how such waste may be minimised.

The book is of a thoroughly practical character and although it does not deal with the steam engine as a machine, it is, what it professes to be, a useful treatise on its theory and action, written for practical men. The author's conclusion as to the efficiency of a thoroughly good modern engine working steam of 100 lb. absolute pressure, or 85 lb. above the atmosphere (not 75, as is erroneously set down on page 59), expanded without liquefaction down to the back pressure, and condensing it, the efficiency of the furnace and boiler being 0·8; the heat due to the coal is approximately disposed of as follows:—Lost by imperfect combustion, radiation from furnace, and carried off by chimney gases, 20 per cent.; radiated from boiler, pipes, cylinder, &c., 2 per cent.; carried to condenser, and to waste in the exhausted steam, 63 per cent.; converted into indicated power 15 per cent. This, says the author, is equivalent to a consumption of little more than one pound of good coal per indicated horse power per hour.

Miscellanea.

"The Twin Sanitary Door." — The object of this invention is to isolate water-closets and apartments in hospitals, dwelling-houses, and other buildings from other parts, as regards air, effluvia, and sound, by means of twin doors in conjunction with suitable mechanism, in such a manner that they will close or open simultaneously. When such doors are closed, an automatic arrangement of mechanism immediately opens a valve and allows a free circulation of air to pass by means of a suitable channel provided for that purpose, from the outside of the building between the doors; or, in the case of injections, effluvia, or germs of disease being supposed to be present, the valve is employed for the admission of fumes, vapours, or gases of a disinfecting nature, which are produced in the chamber in which substances capable of evolving such fumes, vapours, or gases are placed. The doors thus employed are kept at a suitable distance from each other, and the inlet valves are inserted in the upright linings or jambs, an outlet ventilator being placed in the upper part, under the lintel, in order to create the requisite current of air.

Birmingham Engravers.—The Royal Society of Artists of Birmingham will include in their spring exhibition specimens of the works of the line-engravers who were born there. Few persons probably have any idea that Birmingham has produced thirteen of the foremost engravers of the present century, embracing the well-known names of John Pye, J. T. Willmore, A.R.A., A. Willmore, Thomas Jeavons, C. W. Sharpe, W. and E. Radclyffe, J. B. Allen, Samuel Fisher, Thomas Garner, R. and E. P. Brandard, and J. Goodyear. No fewer than 300 specimens of their works have been brought together by the Messrs. Graves, of Pall-mall, and suitably arranged by Mr. Algernon Graves. Eight or nine of the most important works are engravings issued by the Art Union of London, including "The Smile" and "The Frown"; "Harvest in the Highlands"; "Italy"; "Hamlet"; "Dutch Trawlers"; "The Death of Nelson"; and others.

Exhibition of Arrangements for Heating and Ventilation at Cassel, Germany.—This exhibition of heating and ventilating arrangements and apparatus for dwellings, workshops, schools, churches, hospitals, public buildings, and so on, will be held in the large halls of the Orangerie Palace, in the Carlsaue Park. It will include,—1. Central heating apparatus for entire buildings. 2. Stoves only intended for the warming of rooms or other spaces, and all arrangements for ventilation, not forming component parts of central heating apparatus. 3. Stoves provided with arrangements for boiling, for special trade purposes; stoves for workmen's dwellings and cottages; and cooking-stoves, ovens, or ranges of new and peculiar construction. This exhibition will open on the 1st of April, and will close at the end of August, 1877. English exhibitors can apply to Mr. B. D. Fothergill, engineer, Felsberg, Cassel.

Bricklayers' Technical Education Classes. A well-attended meeting was held at the Lecture-hall, Greenwich, on Monday evening, in furtherance of this movement. Dr. Baxter Langley occupied the chair, and in the course of his remarks alluded to the stir that was evidently going on amongst the City guilds, who doubtless having heard of the establishment of these classes thought it was time that they should take some steps in the matter. Mr. F. E. Thicke, president of the classes, gave an account of the origin of the movement, and after the Rev. H. Solly, Mr. Gardner, Mr. Berry, Mr. Woodley, &c., had spoken, the names of forty-seven students to form a local class were entered, and the 1s. entrance-fee was taken from each candidate.

Presentation to Mr. James Edmeston.—At a dinner of the Gas and Water Committee of the Corporation of London, given a few days since at the Guildhall Tavern, a gold watch was presented to Mr. Edmeston, bearing the following inscription:—"Presented to James Edmeston, Esq., F.R.I.B.A., by the Gas and Water Committee of the City of London, as a mark of esteem and regard for the efficiency with which he discharged the duties of Chairman, 1876."

The Office of Works.—According to the *Globe*, the Surveyorship in Scotland, vacant by the death of Mr. Matheson, has been conferred upon Mr. Robertson, Assistant Surveyor in London.

Royal Aquarium, Westminster. — We understand that Mr. John T. Carrington has been appointed "resident naturalist" to the Royal Aquarium Society, Westminster, in place of Mr. W. Saville Kent. Mr. Carrington has for the last year been studying Aquarium management with Mr. W. Alford Lloyd, at the Crystal Palace Aquarium.

Mayer Free Library, Bebington. — The success of the library having been great, the founder, Mr. Joseph Mayer, F.S.A., of Pennant House, Bebington, has presented to the hon. librarian, Mr. Miles Pilling Elsby, a silver goblet, as an acknowledgment of his services, on which is engraved a suitable inscription. The library was opened on the 1st of January, 1866.

River Weaver Navigation. — At the monthly meeting of the Weaver trustees, on the 5th inst., Mr. Lionel Bury Wells, of Pembroke, and formerly engineer in connexion with the construction of the Runcorn Bridge, was appointed engineer of the River Weaver Navigation, in the place of Mr. J. Watt Sandeman.

Fall of a Public-house.—On Monday evening a public-house suddenly fell down in Commercial-road, Portsea. An additional story was being erected, and just as the workmen had left off for the day the whole of the front wall fell into the street. No person was injured.

The Statue of Sir William Fairbairn has been completed by Mr. Geflowski, who obtained the commission in competition with other sculptors. The statue is 8 ft. high, representing Sir W. Fairbairn standing with papers in his hand as if delivering an address.

Cleopatra's Needle. — At the meeting of the Civil and Mechanical Engineers' Society on the 15th inst., a paper was read by Mr. John Dixon, on "The Means of Transport from Egypt and the Erection in London of Cleopatra's Needle."

Oundle.—The Urban Sanitary Authority have appointed Mr. H. Robinson, C.E., and Mr. J. C. Mellis, C.E., of 7, Westminster Chambers, to prepare a scheme for the sewerage and drainage of the town, to meet the requirements of the present sanitary laws.

Society of Lady Artists.—The exhibition for the current year is open at 48, Great Marlborough-street, and deserves a visit. It consists of 715 paintings and drawings selected from nearly 1,300 that were submitted. We will give a few particulars in our next.

Society of Arts.—On Wednesday evening, March 14th, a paper on "The Treatment of Town Refuse and Sewage," by Professor Ansted, F.R.S., was read.

Tercentenary of the Birth of Rubens. The tercentenary of the birth of Rubens occurs in August. Preparations are being made at Antwerp for the due celebration of the event.

TENDERS

For a residence in the Greetwell-grove, Lincoln, for Mr. Wm. Ashley. Messrs. Goddard & Son, architects. Quantities supplied:—

Barnes & Wright	£2,730	0	0
Martin & Sims	2,639	0	0
Otter & Elsey (accepted)	2,389	0	0

For a new Scotch kiln and taking down and rebuilding chimney-shaft, exclusive of all materials, for Messrs. Swan Brothers & Bourne, Patent Brick Works, Burton-road, Lincoln. Messrs. Goddard & Son, architects. Quantities supplied:—

Martin & Sims (accepted)	£366	0	0

For a new Temperance-hall, High-street, Lincoln. Mr. Wm. Watkins, architect. Quantities supplied:—

Brown	£1,140	0	0
Brooks	1,120	0	0
Taylor & Sons	1,100	0	0
Martin & Sims	999	0	0
Otter & Kent	983	0	0
Pearson	980	0	0
Close (accepted)	975	0	0
Chambers	854	0	0

For a villa residence, Temple-gardens, Lincoln, for Mrs. Rudgard. Messrs. Goddard & Son, architects. Quantities supplied:—

Otter & Elsey	£1,188	0	0
Barnes & Wright	1,183	0	0
Martin & Sims (accepted)	1,140	0	0

For the foundations and basement walls of the West End Synagogue, Petersburg-place, Bayswater. Messrs. N. S. Joseph & Pearson and Messrs. Audsley, joint architects:—

Newman & Mann	£1,305	0	0
Browne & Robinson	1,230	0	0
Adamson	1,050	0	0

For proposed alterations at the Jolly Farmers, 48, Cumberland-market, Regent's Park. Mr. James R. Furniss, architect:—

May	£343	0	0
Gould & Brand	341	0	0
Hyde	335	0	0
Somerville & Smith	329	0	0
King (accepted)	238	0	0

For erecting four pairs of villas with boundary walls, Camden Grove estate, for Mr. Daniel Cronin. Messrs. Spalding & Knight, architects. Quantities by Mr. G. Fleetwood:—

Colls & Son	£8,953	0	0
Gammon & Sons	8,181	0	0
Adamson & Sons	8,150	0	0
Nightingale	7,917	0	0
Thompson	7,775	0	0
Dove Brothers	7,749	0	0
Tarrant & Sons	7,632	0	0
Downs & Co.	7,570	0	0
Shepherd (accepted)	7,391	0	0

For erecting a village club, Roehampton. Messrs. Spalding & Knight, architects. Quantities by Mr. G. Fleetwood:—

Nye	£1,124	0	0
Adamson & Sons	976	0	0
Shepherd	950	0	0
Pain	948	0	0
Harvey	943	0	0
Aries	917	0	0
Sutton	875	0	0

For building a babies' classroom to All Saints' National Schools, Childs'-hill. Messrs. Spalding & Knight, architects. Quantities by Mr. G. Fleetwood:—

Batho	£288	15	0
Burford	240	0	0
Lovell	238	0	0
Colliver (accepted)	198	0	0

For iron pipes for the supply of water to Lyme Regis. Specifications and quantities by Mr. W. Langford:—

Bridle & Son	£308	0	0
Croker	297	7	0
Boon	256	0	0
Rowse	243	12	0
Foxwell	239	10	0
Strickland (accepted)	195	0	0

For a warehouse for Rust's Mosaic Works, Albert Embankment. Mr. C. Young, architect:—

J. & T. Lister	£989	0	0
Grimwood & Sons	961	0	0

For erecting lodge and offices for the Manor Park Cemetery Company (Limited), Little Ilford, at the Western or Forest-gate entrance to the cemetery. Mr. Herbert J. Jones, architect. Quantities by the architect:—

Shapley	£1,010	0	0
Stamp & Bowtle	993	0	0
Webb	969	0	0
Winters	895	0	0
Warr (received too late)	873	0	0
Williams (accepted)	777	0	0

For wharfing at Mr. J. T. Morton's manufactory, Millwall, under the superintendence of Wm. Eve, architect:—

Sheffield	£360	0	0
Salt (accepted)	326	0	0

TO CORRESPONDENTS.

L. & B.—M. P.—D. M. G.—C. S.—B. L. B.—P. & B.—I. H. W.—G. P.—R. L. R.—P. D. & Co.—L. B.—Ignoramus—C. F.—G. & B.—W. L.—G. G. & Son.—T. B.—S. S. P.—W. S. W.—W. & K.—J. J.—W. O. (thanks).—W.W.S.

We are compelled to decline pointing out books and giving addresses.

All statements of facts, lists of tenders, &c. must be accompanied by the name and address of the sender, not necessarily for publication.

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.

NOW READY,

CLOTH CASES for binding the Numbers, price Three Shillings each.

READING CASES, price Two Shillings.

COLOURED TITLE-PAGE Gratis.

The THIRTY-FOURTH VOLUME of "THE BUILDER" (bound), for the year 1876, price One Guinea.

SUBSCRIBERS' VOLUMES, on being sent to the Office, will be bound at a cost of Four Shillings each.

Advertisements cannot be received for the current week's issue later than **THREE** o'clock p.m. *on THURSDAY.*

NOTICE TO ADVERTISERS.

GOOD FRIDAY.

"THE BUILDER," for the week ending MARCH 31st, will be published at ELEVEN a.m. on THURSDAY, 29th instant. Advertisements for insertion in that Number must therefore reach the Office before **THREE** p.m. *on WEDNESDAY, the 28th.*

CHARGES FOR "WANTED" ADVERTISEMENTS.

SITUATIONS VACANT.

Six lines (about fifty words) or under ..... 4s. 6d.
Each additional line (about ten words) ..... 0s. 6d.

SITUATIONS WANTED.

FOUR Lines (about THIRTY words) or under .. 2s. 6d.
Each additional line (about ten words) ..... 0s. 6d.

PRE-PAYMENT IS ABSOLUTELY NECESSARY.

TERMS OF SUBSCRIPTION.

"THE BUILDER" is supplied *direct* from the Office, to residents in any part of the United Kingdom at the rate of 18s. per annum. *Payable in Advance.*

All remittances should be by Money Order, payable at the Post-office, King-street, Covent-garden, W.C. to DOUGLAS FOURDRINIER of 46, Catherine-street, W.C.

*** Postage Stamps *must not* be sent.

Bath Stone of best quality.
RANDELL, SAUNDERS, & CO. (Limited),
Quarrymen and Stone Merchants.
List of Prices at the Quarries and Depôts, also cost of transit to any part of the Kingdom, on application to
Bath Stone Office, Corsham, Wilts. [ADVT.]

Patent Selenitic Cement, with double the usual sand, is much stronger than ordinary mortar. Plastering finished in much less time at less cost. Excellent substitute for Portland cement for Concrete at less than half its price.—1, Great College-street, S.W. [ADVT.]

Asphalte.
Seyssel, Patent Metallic Lava and White Asphaltes.
M. STODART & CO.
Office:
No. 90, Cannon-street, E.C. [ADVT.]

The Seyssel and Metallic Lava Asphalte Company (Mr. H. Glenn), Office, 38, Poultry, E.C.—The best and cheapest materials for damp courses, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tan-rooms, terraces, and skating-rinks. [ADVT.]

Whitland Abbey Green Slates.—These Quarries are now fully opened out, and are producing Slates in all sizes, and in any quantity: sound, and of choice green tint.—For samples and further particulars, apply to the MANAGER, Clynderwen, R.S.O., Carmarthenshire. [ADVT.]

Blue Roofing Slates are delivered, in full truck-loads, free to any railway station in Great Britain, direct from the North Wales Quarries, by J. SESSIONS & SONS, Gloucester, who will quote current prices and terms upon application. [ADVT.]

MICHELMORE & REAP,
Manufacturers of
CHARLES COLLINGE'S PATENT
COLLINGE'S PATENT HINGES, LEVER, SCREW, & BARREL BOLTS,
and IMPROVED GATE FITTINGS of every Description.
36A, BOROUGH ROAD, LONDON, S.E.
Discount to Builders. Illustrated List, two stamps.

New Edition (1876), 8vo. pp. 1,400, price 52s. 6d.
GWILT'S ENCYCLOPÆDIA of ARCHITECTURE, Historical, Theoretical, and Practical; illustrated with more than 1,100 Engravings on Wood by R. Branston, from Drawings by J. S. Gwilt. Revised, with Alterations and considerable Additions, by WYATT PAPWORTH, Fellow of the Royal Institute of British Architects: additionally illustrated with nearly 400 Wood Engravings by O. JEWITT, and nearly 200 other Woodcuts.
London: LONGMANS & CO.

Just published, 8vo. price 5s. post-free.
IMPROVED SYSTEM of BOOK-KEEPING. Specially adapted for Builders and Contractors. By the Gainer of the Birkbeck Prize. This system secures accuracy by simplicity of arrangement, and contains within itself a check against errors.—London: HENRY C. BEVES, 8, Agar-street, Strand.

Price 1s. or post-free for 14 stamps. New Edition.
ILLUSTRATED CATALOGUE of STABLE FITTINGS, 90 pages, with full description and prices of the most important inventions and improvements in Stable and Harness-room Fittings, Stable Paving, Drainage, Ventilation, &c.
ST. PANCRAS IRONWORK COMPANY, St. Pancras-road, London, N.W.

EXHIBITION of APPARATUS for COOKING and HEATING by GAS of GAS BATHS, GAS ENGINES, &c.
The Directors of the South Shields Gas Company purpose to hold a PUBLIC and FREE EXHIBITION of the above nature in the FREE LIBRARY HALL, SOUTH SHIELDS, on the 9th, 10th and 11th APRIL, 1877, when seven Silver Medals will be awarded for the best Apparatus exhibited.
The following gentlemen have consented to act as judges:—
JOHN PATTINSON, Esq. Analytical Chemist, Newcastle-upon-Tyne.
W. H. BENNETT, Esq. Civil Engineer, Secretary of the British Association of Gas Managers.
To be assisted in testing Cooking Apparatus by a Professional Cook.
The co-operation of Manufacturers and others is invited.
An early application for prospectus and space is requested, and to be made to the Company's Engineer. W. J. WARNER.
Gas Works, South Shields, March 8th, 1877.

HARRIS & ARCHER,
No. 196, OLD-STREET, ST. LUKE'S,
CARPENTERS and JOINERS to the TRADE.
Estimates given for Doors, Windows, Shop, Office, and Warehouse Fittings. Every description of Joiners' work on the shortest notice. Doors kept in stock.

DESIGNS efficiently PREPARED from ROUGH SKETCHES or otherwise. PERSPECTIVES DRAWN and COLOURED, or ETCHED, in the best style. Terms moderate.
MYERS TAYLOR,
No. 2, BURTON-CRESCENT, RUSSELL-SQUARE, W.C.

FRENCH POLISHING,
By Measurement or Contract.
Experienced Workmen sent to any Part of the Country.
J. ELLERTON, { 2, EDWARD-ST. KINGSLAND-RD. 16, PRITER-RD. BERMONDSEY, S.

QUANTITIES Taken Out, and Buildings Measured Off, with accuracy and despatch.
C. ANDERSON,
BUILDING AND QUANTITY SURVEYOR,
Office, 27, Carey-street, York.

ORNAMENTAL TREES, FRUIT TREES, &c.
A LARGE STOCK, 5 ft. to 12 ft. high. Selections, 25s. per 100; 210s. per 1,000, free on Rail.
Also General Nursery Stock, Roses, Rhododendrons, &c. very Cheap, to effect a Clearance.
CHARLES NOBLE, BAGSHOT.
CATALOGUES ON APPLICATION.

Price One Shilling, a Short Treatise, explaining the Fundamental Principles of Ventilation, entitled
"FRESH AIR IN THE HOUSE, AND HOW TO SECURE IT."
By JAMES CURTIS,
BUILDER OF CHURCHES, HALLS, SCHOOLS, CONSERVATORIES, &c. IN IRON AND ZINC.
LIGHTING, VENTILATING, and WARMING on NATURAL and SCIENTIFIC PRINCIPLES. The Author is prepared to VENTILATE BUILDINGS of every description, including Churches, Halls, Reading-rooms, Libraries, Theatres, Public and Private Offices, Dwelling-houses, Cellars, or Vaults, &c.
Having for many years made the subject of Ventilation his particular care, and having been uniformly successful where his services have been made use of, will guarantee all Works of this description that he may undertake.
. By this system the obnoxious introduction of Perforated Bricks or Iron Gratings in walls is entirely dispensed with.
Estimates and Plans furnished on application. No. 286, EUSTON-ROAD, LONDON, N.W.

PARTNERSHIP.—10,000*l.* to 15,000*l.*—An opportunity occurs for the introduction of a Gentleman in a sound Engineer's, Ironfounder's, and General Contractor's business as PARTNER, either active or otherwise.—Address, Messrs. PARKER, Solicitors, 17, Bedford-row, London.

PARTNERSHIP.—To ARCHITECTS.—WANTED, an ACTING PARTNER, well qualified in useful General Design, to JOIN the Advertiser, who is well-established in South Shields, with a good Practice in General Work, Alterations, &c. 200*l.* premium required for immediate half-share of business. Proposed term of partnership seven years. Applicant will be required to take entire charge of business for some time, the Advertiser being ill. A knowledge of surveying and taking out quantities will be useful.—Apply to T. A. PAGE, Architect and Surveyor, South Shields.

PARTNERSHIP.—To ARCHITECTS.—An established and well-known Firm of Auctioneers, having several important Building Estates, desire a Gentleman of experience to join them to undertake MANAGEMENT of ARCHITECTURAL BRANCH. Capital necessary from 2,000*l.* upwards.—Address, in first instance, stating age, experience, and amount of capital at command, to ROBERT L. RATCLIFF, Esq. Solicitor, 20, Bishopsgate-street Within, E.C.

PARTNERSHIP (Architect and Surveyor's).—A Gentleman experienced in Land and Estate Agency wishes to PURCHASE a SHARE in a sound BUSINESS as above, to establish a Valuing and Land Agency Department.—Replies may be sent to CRAIG & GIBBON, 9, King's-road, Bedford-row, London.

PARTNERSHIP (Engineer's or Contractor's), or EMPLOYMENT in a well-established firm, desired by one who has had 21 years' home and foreign experience as Resident Engineer and Contractor's Agent. Advertiser speaks seven languages, and can invest 1,500*l.* References given and required.—Address, G. Q. 94, Messrs. Deacon's, 154, Leadenhall-street, E.C.

CROYDON LOCAL BOARD of HEALTH.
APPOINTMENT of ROAD FOREMEN.—Notice is hereby given, that the Local Board REQUIRE the services of THREE competent persons as FOREMEN of ROADS in their district. They must possess a knowledge of road-making, and be capable of superintending the labour of the men employed on the roads, and to keep accounts. Wages, 24*s.* per week each.—Applications, accompanied by testimonials of recent date, to be sent to me by FOUR o'clock on MONDAY, the 19th of MARCH inst.—By order of the Board,
E. J. CHEESWRIGHT, Clerk.
Town-hall, Croydon, March 7, 1877.

BOROUGH of WARWICK.—To SURVEYORS.—The Warwick Town Council are prepared to receive APPLICATIONS for the Office of SURVEYOR. Persons desirous of filling the Office, in accordance with the provisions of "The Public Health Act, 1875," and the Bye-laws of the Council, and devoting the whole of their time to the duties of the Office, are requested to forward applications to me (superscribed "Surveyorship"), on or before MONDAY, the 26th instant, stating age, residence, and qualifications, accompanied by testimonials. None need apply who do not possess a thorough knowledge of Building, Road-making, Drainage, Water Service, and other Works in connexion with the improvement and general management of towns. Salary, 150*l.* and a house. Security will be required. No person over forty-five years of age need apply. Any further information may be had upon application to me.—By order of the Town Council,
GLATTELL GREENWAY, Town Clerk.
Jury-street, Warwick, 8th March, 1877.

ASSISTANCE WANTED, by an Architect.—None need apply unless thoroughly practical, as well as tasteful in designing Gothic villas.—Address, stating terms, X. Y. Z. care of Mr. Edwards, No. 1, Adelaide-place, London Bridge.

ASSISTANT (Architectural) WANTED, in a good Country Office, where there are several others.—Send qualifications, testimonials, age, and all particulars, to 993, Office of "The Builder."

ASSISTANT (Architectural) WANTED, of some years' experience, accustomed to quantities.—Address, stating terms and references, MYRES, VEEVERS, & MYRES, No. 18, Chapel-street, Preston.

ASSISTANT (Architectural) WANTED, thoroughly competent, and having a good knowledge of specification work.—Address, stating terms and references, Messrs. BROWN & ALBURY, Reading.

ASSISTANT (Engineer's or Contractor's) WANTED. Must be experienced in levelling, setting out, and measuring up works, and making working drawings, on a short line near London.—Address, stating references, age, and salary required, to No. 112, Office of "The Builder."

TRACING CLERK required in an Architect's Office. Must be a first-class printer. Salary, one guinea per week.—Apply to T. TAYLEE SMITH, 4, Crown-place, Finsbury.

CLERK.—WANTED, a trustworthy Man, well conversant with the duties of a Builder's Office.—Address, with reference, age, and salary required, W. ROBINSON, Builder, Worcester.

CLERK.—WANTED, in a country builder's Office, an experienced man. Energetic and trustworthy, and competent to take the entire management.—Address, with reference, salary required, &c. No. 181, Office of "The Builder."

YOUTH (in Builder's Office, intelligent) WANTED, about sixteen years of age.—Apply to AITCHISON & WALKER, Portland-yard, St. John's-wood, N.W.

CLERK of WORKS (experienced) Wanted, in about a month or six weeks, to SUPERINTEND the erection of Additions to a County Lunatic Asylum. All applicants must give reference to former employers, and state age and terms.—Address, Messrs. G. FOWLER, JONES, & SON, Architects, 3, Stonegate, York.

MANAGER (Brickmaking) WANTED, thoroughly experienced and accustomed to machine Brickmaking. Salary 150*l.* a year.—Address, with testimonials and references, which must be first-rate, on or before 26th MARCH, THOMAS YEATES, Secretary, Wallasey Brick and Land Company, Central Chambers, Liverpool.

WORKING FOREMAN (Carpenter) WANTED (thoroughly good). First-class references will be required as to sobriety, honesty, and ability.—Address, Mr. E. SETH SMITH, The Grove, Thornton-heath, near Croydon.

WORKING FOREMAN WANTED, to superintend the erection of concrete house in the country.—Address, stating wages required, and inclosing references, C. F. C. No. 6, Derby-villas, New Malden, Surrey.

WORKING FOREMAN of MASONS (thoroughly efficient) WANTED at once, for a permanency, to take entire charge of moderately large jobs in brick and stone. He must be active, pushing, honest, sober, and industrious, and have a satisfactory character from previous employers.
Address, in own handwriting, stating age, where last engaged, and wages, to
VERITAS, Post-office, Reading.

WALKING FOREMAN of PAINTERS WANTED.—Must understand plumbing, and general knowledge of all trades. Able to measure and estimate for jobbing work. Only those well up, energetic, and steady, need reply, stating salary and London references. No. 99, Office of "The Builder."

WORKING SHOP FOREMAN Wanted, where machinery is used. Must be sober, intelligent, and pushing. Used to relaying out rods and management of men. To a good energetic man wages and a share of the profits would be given. Apply to J. LEWIS, Horticultural Works, steam'ord-hill.

WORKING SHOP FOREMAN of JOINERS WANTED (good). Also a WORKING FOREMAN of CARPENTERS. Must be energetic and trustworthy. If suitable for a permanency.—Address, stating age and wages, to No. 95, Office of "The Builder."

BUILDER'S FOREMAN WANTED, on a Nobleman's Estate in one of the Midland Counties. Must be a quick draughtsman and possess a practical knowledge of the business. He will have to set out the work and control the men under a clerk of works.
Applications, with full particulars and references as to character and ability, stating wages required, to be addressed AGENT, care of Waterlow, Bros. & Layton, Birchin-lane, London, E.C.

FOREMAN of CARPENTERS Wanted.—One used to a jobbing business.—Apply, any day after MONDAY, between NINE and TEN a.m. at 42, Upper Baker-street, Regent's Park.

FOREMAN (Ironmongers' and Smiths').—WANTED, a practical Man as INDOOR FOREMAN.—Address, R. H. & J. PEARSON, Ironmongers, Gas and Hot-Water Engineers, &c. Notting-hill.

FOREMAN or MANAGER (Builder and Decorator's).—WANTED, at the West End, a competent, steady, and energetic Man, to Assist Principal, who takes an active part. Joiner by trade preferred.—Address, stating terms, where and how long in last employ, No. 139, Office of "The Builder."

SHOP FOREMAN of JOINERS Wanted, where over fifty are employed.—Address, stating age, terms, and previous engagements, No. 127, Office of "The Builder."

SHOP FOREMAN of JOINERS Wanted. Must be energetic, sober, accustomed to machinery, able to read working drawings, and quick at setting out.—Address, G. care of Mr. Pilcher, Newsagent, 134 Gray's-inn-road.

TRAVELLER, of good address, and with good connexion amongst builders, WANTED for JOINERY and TIMBER TRADE.—Address, with testimonials, Messrs. LLOYD & CO. Lloyd's Wharf, Nine Elms.

TRAVELLER (Timber Trade).—Wanted, an energetic Man.—Send full particulars, salary, &c. to S. N. H. at Mr. Drewett's, Stationer, High street, Borough, S.E.

TIMBER TRADE.—WANTED, an active, intelligent, young MAN, who understands the nature of counting-house work, and occasionally to call on Builders, &c. A thorough knowledge of the business required, and unexceptionable references.—Address, stating a.c. wages, and previous occupation, to W. & J. E. HUNTER, 87, Moorgate-street, E.C.

SIGN WRITER WANTED for a PERMANENCY. Also a vacancy for a good IMPROVER.—Apply M. LUCK, 6a, Lewisham-road, Greenwich, S.E.

WRITER, GRAINER, and PAPERHANGER, and to fill up time Painting, WANTED for the Country. A constancy to a suitable man.—Address, R. B. 22, Blackheath-hill, Greenwich.

GRAINER, WRITER, and Paperhanger.—WANTED, at once, a good Workman, who will fill up time painting, &c. Constancy for suitable man.—Address, stating references and wages required, D. INNS, Plumber and Decorator, Chislehurst.

MASON WANTED, to Take the Management of a branch CEMETERY BUSINESS.—Apply to J. DRUITT, 356, Mile End-road, E.

MONUMENTAL MASONS.—WANTED, TWO good, steady MEN, and an IMPROVER to CARVING.—J. DILTON, 47, Oxford-street, Manchester.

FITTER and SMITH.—WANTED immediately, in Brickworks, a steady, experienced, GENERAL HAND, capable of repairing portable engines and brick machinery. Apply, stating full particulars, wages required, &c. to OTFORD GAULT BRICKWORKS, Sevenoaks, or 4, Victoria-street, Westminster, S.W.

CONCRETE BUILDING.—WANTED, a steady MAN, accustomed to this work, to take some building at Anerley, by the rod.—Apply to Messrs. EASTMAN & SON, 14, South-place, Finsbury.

CARPENTERS and JOINERS (several good) WANTED.—Apply to WILLIAM HAWKINS, Builder and Contractor, Brackley, Northamptonshire.